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 SDIs in CPlus  
 NEWS 9 May 27 CPlus super roles and document types searchable in REGISTRY  
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 NEWS 11 Jun 22 STN Patent Forums to be held July 19-22, 2004  
 NEWS 12 Jun 28 Additional enzyme-catalyzed reactions added to CASREACT  
 NEWS 13 Jun 28 ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG,  
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NEWS EXPRESS MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT  
 MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
 AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004

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FILE 'HOME' ENTERED AT 14:41:16 ON 04 JUL 2004

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 14:41:34 ON 04 JUL 2004

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STRUCTURE FILE UPDATES: 2 JUL 2004 HIGHEST RN 703404-07-3

DICTIONARY FILE UPDATES: 2 JUL 2004 HIGHEST RN 703404-07-3

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

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Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR

=> s 11

SAMPLE SEARCH INITIATED 14:42:52 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 9066 TO ITERATE

11.0% PROCESSED 1000 ITERATIONS

23 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 175615 TO 187025

PROJECTED ANSWERS: 3304 TO 5036

L2 23 SEA SSS SAM L1

=>

L3 STRUCTURE UPLOADED

=> d 13

L3 HAS NO ANSWERS

L3 STR

=> s 13

SAMPLE SEARCH INITIATED 14:45:16 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 521 TO ITERATE

100.0% PROCESSED 521 ITERATIONS

11 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 9051 TO 11789

PROJECTED ANSWERS: 21 TO 417

L4 11 SEA SSS SAM L3

=> s 13 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS

DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 14:45:22 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 10019 TO ITERATE

100.0% PROCESSED 10019 ITERATIONS

174 ANSWERS

SEARCH TIME: 00.00.01

L5 174 SEA SSS FUL L3

=&gt; file hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

157.52

157.73

FILE 'HCAPLUS' ENTERED AT 14:45:27 ON 04 JUL 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 4 Jul 2004 VOL 141 ISS 2

FILE LAST UPDATED: 2 Jul 2004 (20040702/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=&gt; s 15

L6 48 L5

=&gt; s 16 and brown, d?/au

7795 BROWN, D?/AU

L7 0 L6 AND BROWN, D?/AU

=&gt; s 16 and graneto, m?/au

39 GRANETO, M?/AU

L8 0 L6 AND GRANETO, M?/AU

=&gt; s 16 and ludwig, c?/au

267 LUDWIG, C?/AU

L9 0 L6 AND LUDWIG, C?/AU

=&gt; s 16 and talley, j?/au

189 TALLEY, J?/AU

L10 0 L6 AND TALLEY, J?/AU

=&gt; d 16, ibib abs fhitr, 1-48

L6 ANSWER 1 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER:

2004:182368 HCAPLUS

DOCUMENT NUMBER:

140:229401

TITLE:

Three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands

INVENTOR(S):

Come, Jon H.; Becker, Frank; Kley, Nikolai A.;

Reichel, Christoph  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 238 pp., Cont.-in-part of U.S.  
 Ser. No. 91,177.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004043388	A1	20040304	US 2002-234985	20020903
US 2003165873	A1	20030904	US 2002-91177	20020304
PRIORITY APPLN. INFO.:			US 2001-272932P	P 20010302
			US 2001-278233P	P 20010323
			US 2001-329437P	P 20011015
			US 2002-91177	A2 20020304

AB The invention provides compns. and methods for isolating ligand-binding polypeptides for a user-specified ligand, and for isolating small mol. ligands for a user-specified target polypeptide using an improved class of hybrid ligand compds. Prepn. of compds., e.g a methotrexate moiety linked by a polyethylene glycol moiety to dexamethasone, is described.

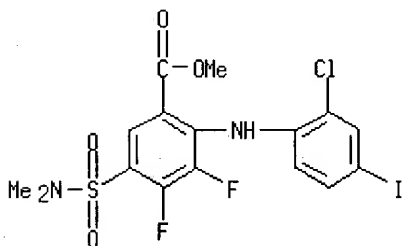
IT 285125-84-0D, conjugates

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

RN 285125-84-0 HCAPLUS

CN Benzoic acid, 2-[(2-chloro-4-iodophenyl)amino]-5-[(dimethylamino)sulfonyl]-3,4-difluoro-, methyl ester (9CI) (CA INDEX NAME)



L6 ANSWER 2 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 2003:836829 HCAPLUS  
 DOCUMENT NUMBER: 139:323519  
 TITLE: Preparation of imidazoarenes as prostaglandin E2 subtype EP4 receptor antagonists for treatment of IL-6 involved diseases  
 INVENTOR(S): Shimojo, Masato; Taniguchi, Kana  
 PATENT ASSIGNEE(S): Pfizer Pharmaceuticals Inc., Japan; Pfizer Inc.  
 SOURCE: PCT Int. Appl., 427 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003086371	A2	20031023	WO 2003-IB1310	20030403
WO 2003086371	A3	20040603		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003236260	A1	20031225	US 2003-411491	20030410
PRIORITY APPLN. INFO.:			US 2002-372364P	P 20020412
OTHER SOURCE(S):		MARPAT 139:323519		
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The present invention relates to the use of a prostaglandin E2 (PGE2) subtype EP4 receptor ligand in the manuf. of a medicament for the treatment of interleukin 6 (IL-6) involved diseases, such as alc. cirrhosis, amyloidosis, atherosclerosis, cardiac disease, sclerosis, and organ transplantation reactions (no data). The invention also relates to the assay which comprises culturing peripheral whole blood with a test compd. and detg. the effect of the compd. on PGE2-induced whole blood cells activation. Three hundred eighty title compds. I [wherein Y1-Y4 = N, CH, CL; R1 = H, (un)substituted alkyl, alkenyl, alkynyl, cycloalkyl, alkoxy, pyrrolidinyl, amino, etc.; A = (un)substituted 5-6 membered (un)substituted monocyclic (hetero)arom. ring; B = halo-substituted alkylene, cycloalkylene, alkenylene, alkynylene, alkyleneoxy, etc., optionally substituted with an oxo or alkyl group; W = amino, O, S, bond, etc.; R2 = H, OH, alkyl, alkoxy; Z = 5-12 membered (un)substituted monocyclic or bicyclic (hetero)aryl; L = halo, alkyl, haloalkyl, OH, alkoxy, haloalkoxy, alkylthio, NO2, amino, etc.] were prepd. Thus, cycloaddn. of 2-[4-[(3-amino-4,6-dimethyl-2-pyridinyl)amino]phenyl]ethanol (4-step prepn. given) with propionyl chloride in toluene provided 2-[4-(2-ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridin-3-yl)phenyl]ethyl propionate, which was treated with aq. LiOH to give the ethanol deriv. (86%). Chlorination (90%) using thionyl chloride, conversion to the azide (85%), and Pd/C catalyzed hydrogenation afforded the amine (94%). Coupling of the amine with p-toluenesulfonyl isocyanate in CH2Cl2 gave II (56%). The latter significantly inhibited IL-6 secretion by PGE2 in ConA-stimulated human peripheral blood mononuclear cells (PBMC).

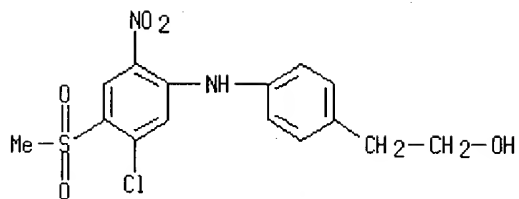
IT 415913-56-3P, 2-[4-[5-Chloro-4-(methylsulfonyl)-2-nitroanilino]phenyl]ethanol

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of imidazoarene prostaglandin EP4 receptor antagonists for treatment of IL-6 involved diseases)

RN 415913-56-3 HCAPLUS

CN Benzeneethanol, 4-[[5-chloro-4-(methylsulfonyl)-2-nitrophenyl]amino]-(9CI) (CA INDEX NAME)



L6 ANSWER 3 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 2003:719203 HCAPLUS  
 DOCUMENT NUMBER: 139:245765  
 TITLE: Nitroso derivatives of diphenylamine and pharmaceutical compositions containing them as drugs useful in the treatment of pathologies characterized by oxidative stress  
 INVENTOR(S): Lardy, Claude; Festal, Didier; Caputo, Lidia; Guerrier, Daniel  
 PATENT ASSIGNEE(S): Lipha, Fr.  
 SOURCE: Fr. Demande, 88 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2836917	A1	20030912	FR 2002-3025	20020311
WO 2003076406	A1	20030918	WO 2003-EP1370	20030212

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: FR 2002-3025 A 20020311  
 OTHER SOURCE(S): MARPAT 139:245765  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to compds. I [wherein: each core Ph group is optionally substituted one or more times; n = 0, 1, 2, 3, 4, or 5; W = CO or SO<sub>2</sub>; Z = H, alkyl, aryl, or arylalkyl; R<sub>1</sub> = any monovalent org. group; and pharmaceutically acceptable salts]. I are useful in the treatment of pathologies which are characterized by a condition of oxydative stress, and a deficit of the availability of endothelial nitric oxide (NO). I are generally prepd. via the corresponding diphenylamines. Some of these diphenylamine precursors are also useful as medicinal antioxidants. Both I and the diphenylamines are useful for prepg. medicaments for treating

the metabolic syndrome of insulin resistance. For instance, Pd(0)-catalyzed coupling of 4-bromo-N-(pyridin-3-yl)benzamide with 4-methoxyaniline gave a diphenylamine deriv., 4-[(4-methoxyphenyl)amino]-N-(pyridin-3-yl)benzamide (II) in 55.9% yield. Nitrosation of II with aq. NaNO<sub>2</sub> in AcOH at room temp. gave 96.9% nitrosamine III. At 150 µM in a test soln., compds. I spontaneously liberated NO, giving a colorimetric nitrate-nitrite level of 46-108 µM. In a test for antioxidant effect on the cupric ion-induced oxidn. of human LDL in vitro, III had an IC<sub>50</sub> of 4.6 µM.

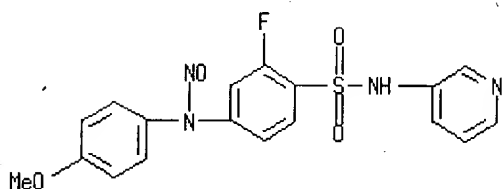
IT **600170-59-0P**, 4-[1-(4-Methoxyphenyl)-2-oxohydrazino]-N-(3-pyridyl)-2-fluorobenzenesulfonamide

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(antioxidant and NO donor; prepn. of N-nitrosodiphenylamines and analogs as antioxidants for treatment of oxidative stress and related pathol.)

RN **600170-59-0** HCAPLUS

CN Benzenesulfonamide, 2-fluoro-4-[(4-methoxyphenyl)nitrosoamino]-N-3-pyridinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Citing  
Text References

ACCESSION NUMBER: 2003:591139 HCAPLUS

DOCUMENT NUMBER: 139:149426

TITLE: Preparation of N-(4-substituted phenyl)-anthranilic acid hydroxamate esters as MAPK/ERK kinase inhibitors useful for treatment of proliferative disorders

INVENTOR(S): Barrett, Stephen Douglas; Kaufman, Michael David; Milbank, Jared Bruce John; Rewcastle, Gordon William; Spicer, Julie Ann; Tecle, Haile

PATENT ASSIGNEE(S): Warner-Lambert Company Llc, USA

SOURCE: PCT Int. Appl., 121 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062191	A1	20030731	WO 2003-IB211	20030113
WO 2003062191	C1	20031224		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,

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 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,  
 CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
 NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
 ML, MR, NE, SN, TD, TG

US 2004006245

A1 20040108

US 2003-349801

20030123

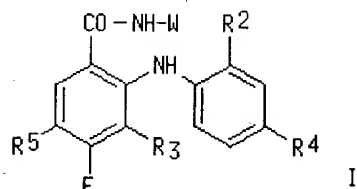
PRIORITY APPLN. INFO.:

US 2002-351201P P 20020123

OTHER SOURCE(S):

MARPAT 139:149426

GI



AB The present invention relates to oxygenated esters of 4-substituted-phenylamino benzhydroxamic acid derivs. (shown as I; variables defined below; e.g. 2-[(4-ethyl-2-fluorophenyl)amino]-3,4-difluoro-N-(2-hydroxyethoxy)benzamide), pharmaceutical compns. and methods of use thereof. Although the methods of prepn. are not claimed, 33 example prepn. of I are included. IC50 values for cellular inhibition of ERK phosphorylation by 32 examples of I are reported, e.g. 0.00015  $\mu$ M for 3,4-difluoro-2-(2-fluoro-4-methylanilino)-N-(2-hydroxyethoxy)benzamide. For I: W is HOCH2CH2O, enantiomers of HOCH2CH(OH)CH2O, or OCH(CH2OH)2; R2 is H, Me, F, or Cl; R3 is H or F; R4 is C1-6 alkyl, C2-4 alkenyl, C2-6 alkynyl, C3-6 cycloalkyl, -(CH2)-C3-6 cycloalkyl, -O-(C1-4 alkyl), -S-(C1-2 alkyl), -SO2CH3, -SO2NR6R7, -C $\equiv$ C-(CH2)nNH2, -C:C(CH2)nOH, -C:C-(CH2)nNH2, -(CH2)mNH2, -(CH2)mNHCH3, -(CH2)mNMe2, -(CH2)mOR8, -(CH2)qCF3, -C $\equiv$ CCF3, -CH:CHCF3, -CH2CHCF2, or -CH:CF2, wherein the C1-6 alkyl and C2-6 alkynyl are (un)substituted with = 1-3 hydroxy and alkyl; m is 1 to 4; n is 1 to 2; q is 0 to 2; R5 is H or Cl; R6 and R7 are each independently H, Me, or Et; R8 = Me or Et.

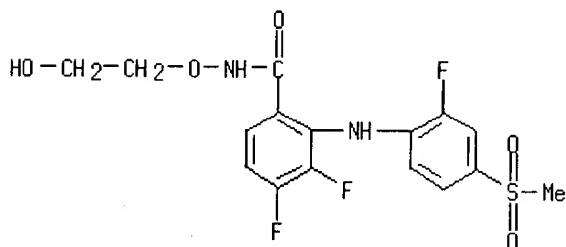
IT 568600-03-3P, 3,4-Difluoro-2-[[2-fluoro-4-(methylsulfonyl)phenyl]amino]-N-(2-hydroxyethoxy)benzamide

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; prepn. of N-(4-substituted phenyl)-anthranilic acid hydroxamate esters as MAPK/ERK kinase inhibitors useful for treatment of proliferative disorders)

RN 568600-03-3 HCAPLUS

CN Benzamide, 3,4-difluoro-2-[[2-fluoro-4-(methylsulfonyl)phenyl]amino]-N-(2-hydroxyethoxy)- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



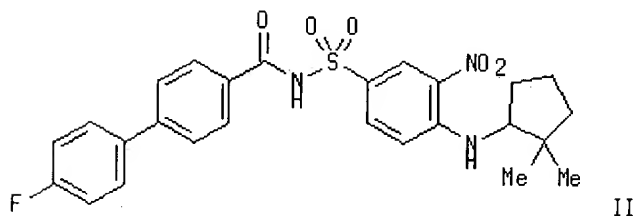
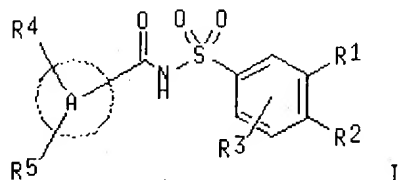
L6 ANSWER 5 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 2002:505411 HCAPLUS  
 DOCUMENT NUMBER: 137:78769  
 TITLE: Preparation of N-arylcarbonyl- and heteroarylcarbonyl benzenesulfonamide inhibitors of Bcl-Xl and Bcl-2 as promoters of apoptosis  
 INVENTOR(S): Augeri, David J.; Baumeister, Steven A.; Bruncko, Milan; Dickman, Daniel A.; Ding, Hong; Dinges, Jurgen; Fesik, Stephen W.; Hajduk, Philip J.; Kunzer, Aaron R.; McClellan, William; Nettesheim, David G.; Oost, Thorsten; Petros, Andrew M.; Rosenberg, Saul H.; Wang, Shen; Thomas, Sheela A.; Wang, Xilu; Wendt, Michael D.  
 PATENT ASSIGNEE(S): Abbott Laboratories, USA  
 SOURCE: U.S. Pat. Appl. Publ., 126 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002086887	A1	20020704	US 2001-957276	20010920
US 6720338	B2	20040413		

PRIORITY APPLN. INFO.: US 2000-233866P P 20000920  
 OTHER SOURCE(S): MARPAT 137:78769  
 GI



AB N-aryl- and N-heteroarylcarbonyl benzenesulfonamides I [A = (un)substituted Ph, 5- or 6-membered heterocyclic ring with 1-3 N, O, or S atoms; R1 = alkyl, haloalkyl, NO<sub>2</sub>, NR<sub>6</sub>R<sub>7</sub>; R2, R3 = H, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, etc.; R4 = aryl, arylalkenyl, arylalkoxy, cycloalkenyl, cycloalkyl, halo, heterocyclyl, heterocyclyloxy; R5 = H, alkyl, halo; R6, R7 = H, alkenyl, alkoxyalkyl, alkoxycarbonylalkyl, alkyl, heterocyclyl, etc.; R<sub>6</sub>R<sub>7</sub>N = imidazolyl, morpholinyl, piperazinyl, piperidinyl, pyrrolidinyl, etc.] are prepd. Over 500 I are prepd. E.g., N-biphenylcarbonyl benzenesulfonamide II was prepd. by Pd-catalyzed coupling of 4-FC<sub>6</sub>H<sub>4</sub>B(OH)<sub>2</sub> and 4-BrC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me, hydrolysis of the ester with

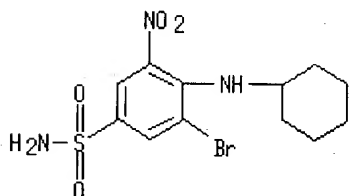
LiOH, acylation of 4-chloro-3-nitrobenzenesulfonamide with the resulting acid in the presence of EDCI and DMAP, and nucleophilic arom. substitution of the chlorobenzenesulfonamide with 2,2-dimethylcyclopentylamine. Compds. of the invention inhibit Bcl-Xl with IC50 values between 0.011  $\mu$ M and 10  $\mu$ M, and inhibit Bcl-2 with IC50 values between 0.017  $\mu$ M and 10  $\mu$ M.

IT 406232-68-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of N-aryl- and heteroarylcarbonyl benzenesulfonamide inhibitors of Bcl-Xl and Bcl-2 as promoters of apoptosis)

RN 406232-68-6 HCAPLUS

CN Benzenesulfonamide, 3-bromo-4-(cyclohexylamino)-5-nitro- (9CI) (CA INDEX NAME)



L6 ANSWER 6 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
References

ACCESSION NUMBER:

2002:354097 HCAPLUS

DOCUMENT NUMBER:

136:355074

TITLE:

Preparation of N-arylcarbonyl- and heteroarylcarbonyl benzenesulfonamide inhibitors of Bcl-Xl and Bcl-2 as promoters of apoptosis

INVENTOR(S):

Augeri, David J.; Baumeister, Steven A.; Bruncko, Milan; Dickman, Daniel A.; Ding, Hong; Dinges, Jurgen; Fesik, Stephen W.; Hajduk, Philip J.; Kunzer, Aaron R.; McClellan, William; Nettesheim, David G.; Oost, Thorsten; Petros, Andrew M.; Rosenberg, Saul H.; Shen, Wang; Thomas, Sheela A.; Wang, Xilu; Wendt, Michael D.

PATENT ASSIGNEE(S):

USA

SOURCE:

U.S. Pat. Appl. Publ., 126 pp., Cont.-in-part of U.S. Ser. No. 666,508.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002055631	A1	20020509	US 2001-935581	20010824
WO 2002024636	A2	20020328	WO 2001-US29432	20010920
WO 2002024636	A3	20020926		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,

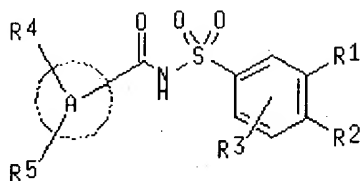
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2001091151 A5 20020402 AU 2001-91151 20010920  
 EP 1318978 A2 20030618 EP 2001-971244 20010920

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

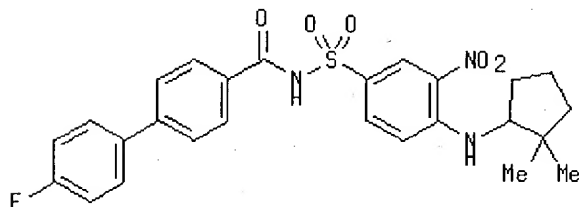
PRIORITY APPLN. INFO.:

US 2000-666508 A2 20000920  
 US 2001-935581 A 20010824  
 WO 2001-US29432 W 20010920

OTHER SOURCE(S): MARPAT 136:355074  
 GI



I



II

AB N-aryl- and N-heteroarylcarbonyl benzenesulfonamides I [A = (un)substituted Ph, 5- or 6-membered heterocyclic ring with 1-3 N, O, or S atoms; R1 = alkyl, haloalkyl, NO2, NR6R7; R2, R3 = H, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, etc.; R4 = aryl, arylalkenyl, arylalkoxy, cycloalkenyl, cycloalkyl, halo, heterocyclyl, heterocyclyloxy; R5 = H, alkyl, halo; R6, R7 = H, alkenyl, alkoxyalkyl, alkoxyalkylalkyl, alkyl, heterocyclyl, etc.; R6R7N = imidazolyl, morpholinyl, piperazinyl, piperidinyl, pyrrolidinyl, etc.] are prepd. Over 500 I are prepd. E.g., N-biphenylcarbonyl benzenesulfonamide II was prepd. by Pd-catalyzed coupling of 4-FC6H4B(OH)2 and 4-BrC6H4CO2Me, hydrolysis of the ester with LiOH, acylation of 4-chloro-3-nitrobenzenesulfonamide with the resulting acid in the presence of EDCI and DMAP, and nucleophilic arom. substitution of the chlorobenzenesulfonamide with 2,2-dimethylcyclopentylamine. Comps. of the invention inhibit Bcl-X1 with IC50 values between 0.011  $\mu$ M and 10  $\mu$ M, and inhibit Bcl-2 with IC50 values between 0.017  $\mu$ M and 10  $\mu$ M.

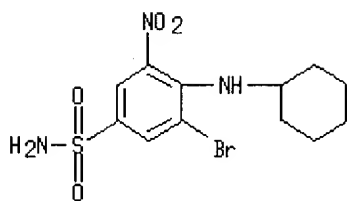
IT 406232-68-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of N-aryl- and heteroarylcarbonyl benzenesulfonamide inhibitors of Bcl-X1 and Bcl-2 as promoters of apoptosis)

RN 406232-68-6 HCAPLUS

CN Benzenesulfonamide, 3-bromo-4-(cyclohexylamino)-5-nitro- (9CI) (CA INDEX NAME)



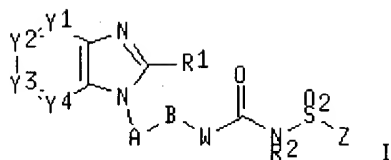
L6 ANSWER 7 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 2002:314939 HCAPLUS  
 DOCUMENT NUMBER: 136:340677  
 TITLE: Preparation of imidazoarenes as antiinflammatory and analgesic agents.  
 INVENTOR(S): Nakao, Kazunari; Okumura, Yoshiyuki; Matsumizu, Miyako; Uneo, Naomi; Hashizume, Yoshinobu; Kato, Tomoki; Kawai, Akiyoshi; Miyake, Yoriko; Nukui, Seiji; Shinjyo, Katsuhiko; Taniguchi, Kana  
 PATENT ASSIGNEE(S): Pfizer Pharmaceuticals Inc., Japan; Pfizer Inc.  
 SOURCE: PCT Int. Appl., 461 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032900	A2	20020425	WO 2001-IB1940	20011015
WO 2002032900	A3	20020808		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002077329	A1	20020620	US 2001-977761	20011015
US 2002107273	A1	20020808	US 2001-977621	20011015
US 6710054	B2	20040323		
EP 1326864	A2	20030716	EP 2001-978702	20011015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
EE 200300190	A	20031015	EE 2003-190	20011015
BR 2001014704	A	20040225	BR 2001-14704	20011015
JP 2004517054	T2	20040610	JP 2002-536282	20011015
BG 107699	A	20031231	BG 2003-107699	20030403
NO 2003001582	A	20030617	NO 2003-1582	20030408
PRIORITY APPLN. INFO.:			US 2000-241825P	P 20001019
			WO 2001-IB1940	W 20011015

OTHER SOURCE(S): MARPAT 136:340677  
 GI



AB Title compds. [I; Y1-Y4 = N, CH, CL; R1 = H, (substituted) alkyl, alkenyl, alkynyl, cycloalkyl, alkoxy, pyrrolidinyl, amino, etc.; A = (substituted) 5-6 membered monocyclic arom. ring optionally contg. up to 3 heteroatoms selected from O, N, S, etc.; B = halo-substituted alkylene, cycloalkylene, alkenylene, alkynylene, alkyleneoxy, etc., optionally substituted with an oxo group; W = amino, O, S, bond, etc.; R2 = H, OH, alkyl, alkoxy; Z = 5-12 membered (substituted) monocyclic or bicyclic aryl optionally contg. up to 3 heteroatoms selected from O, N and S, etc.; L = halo, alkyl, haloalkyl, OH, alkoxy, haloalkoxy, alkylthio, NO<sub>2</sub>, amino, etc.], were prepd. as prostaglandin E2 receptor antagonists, preferably as EP4 receptor antagonists. Thus, to 2-[4-(2-ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridin-3-yl)phenyl]ethylamine (prepn. given) in CH<sub>2</sub>Cl<sub>2</sub> was added p-toluenesulfonyl isocyanate followed by stirring for 3 h to give 56% 2-ethyl-5,7-dimethyl-3-[4-[2-[[[(4-methylphenyl)sulfonyl]amino]carbon yl]amino]ethyl]phenyl]-3H-imidazo[4,5-b]pyridine. Preferred I inhibited PGE<sub>2</sub>-induced thermal hyperalgesia in rats with ED<sub>50</sub><60 mg/kg.

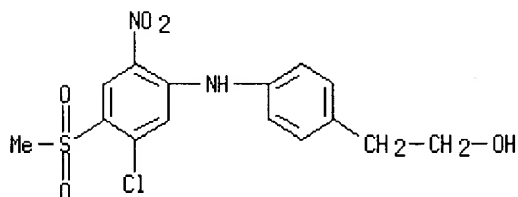
IT 415913-56-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of imidazoarene prostaglandin EP4 receptor antagonists as antiinflammatory and analgesic agents)

RN 415913-56-3 HCAPLUS

CN Benzeneethanol, 4-[[5-chloro-4-(methylsulfonyl)-2-nitrophenyl]amino]-(9CI) (CA INDEX NAME)



L6 ANSWER 8 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

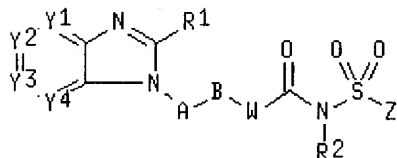
Full Text Citing  
References

ACCESSION NUMBER: 2002:314767 HCAPLUS  
DOCUMENT NUMBER: 136:340676  
TITLE: Preparation of benzimidazole derivatives as prostaglandin EP4 receptor inhibitors to treat rheumatoid arthritis  
INVENTOR(S): Audoly, Laurent; Okumura, Takako; Shimojo, Masato  
PATENT ASSIGNEE(S): Pfizer Pharmaceuticals Inc., Japan; Pfizer Inc.  
SOURCE: PCT Int. Appl., 468 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002032422	A2	20020425	WO 2001-IB1942	20011015
WO 2002032422	A3	20020725		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002077329	A1	20020620	US 2001-977761	20011015
US 2002107273	A1	20020808	US 2001-977621	20011015
US 6710054	B2	20040323		
BR 2001014758	A	20030701	BR 2001-14758	20011015
EP 1326606	A2	20030716	EP 2001-974609	20011015
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
EE 200300188	A	20031015	EE 2003-188	20011015
JP 2004511518	T2	20040415	JP 2002-535660	20011015
NO 2003001658	A	20030610	NO 2003-1658	20030410
BG 107732	A	20040130	BG 2003-107732	20030416
PRIORITY APPLN. INFO.:			US 2000-241825P	P 20001019
			WO 2001-IB1942	W 20011015

OTHER SOURCE(S): MARPAT 136:340676  
GI



AB Benzimidazole derivs. I wherein Y1-Y4 are independently N, CH, alkyl, alkoxy, haloalkyl, halo, substituted alkyl, R1 is H, alkyl, alkenyl, alkynyl, cycloalkyl, alkoxy, haloalkoxy, heterocycle; R2 is H, alkyl, alkoxy, OH; A is substituted heterocycle arom ring; B is haloalkylene, cycloalkylene, alkenylene, alkynylene, oxyalkylene; W is NH, aminoalkyl, O, S, oxime, covalent bond; Z is monocyclic and bicyclic arom. heterocycle, were prepd. as prostaglandin EP4 receptor inhibitors to treat rheumatoid arthritis of rats and human. Also featured is a method of identifying agents that selectively inhibit EP4 activity in vivo. Thus, 3-(4-{2[({[(3,4-dichlorophenyl)sulfonyl]amino}carbonyl)amino]ethyl}phenyl)-2-ethyl-5,7-dimethyl-3H-imidazo[4,5-b]pyridine, hydrochloride was prepd. and tested in vivo as an agent selectively inhibiting EP4 activity or selectively binding EP4; and measuring joint inflammation, joint swelling, joint ankylosis, interleukin (IL)-6, SAA protein, and/or joint mobility.

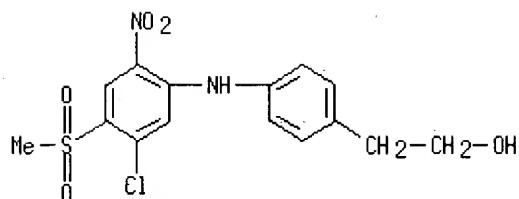
IT 415913-56-3P, 2-[4-[5-Chloro-4-(methylsulfonyl)-2-nitroanilinolphenyl]ethanol

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of benzimidazole derivs. as prostaglandin ep receptor inhibitors to treat rheumatoid arthritis)

RN 415913-56-3 HCAPLUS

CN Benzeneethanol, 4-[[5-chloro-4-(methylsulfonyl)-2-nitrophenyl]amino]- (9CI) (CA INDEX NAME)



L6 ANSWER 9 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

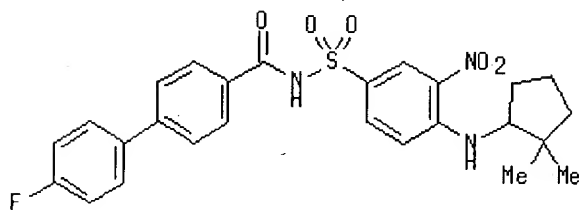
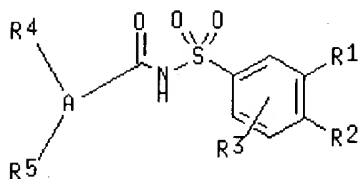
Full Text	Citing References
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ACCESSION NUMBER: 2002:240717 HCAPLUS  
 DOCUMENT NUMBER: 136:279215  
 TITLE: Preparation of N-arylcarbonyl- and heteroarylcarbonyl benzenesulfonamide inhibitors of Bcl-Xl and Bcl-2 as promoters of apoptosis  
 INVENTOR(S): McClellan, William; Oost, Thorsten; Bruncko, Milan; Wang, Xilu; Augeri, David J.; Baumeister, Steven A.; Dickman, Daniel A.; Ding, Hong; Dinges, Jurgen; Fesik, Stephen W.; Hajduk, Philip J.; Kunzer, Aaron R.; Nettesheim, David G.; Petros, Andrew M.; Rosenberg, Saul H.; Shen, Wang; Thomas, Sheela A.; Wendt, Michael D.  
 PATENT ASSIGNEE(S): Abbott Laboratories, USA  
 SOURCE: PCT Int. Appl., 292 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002024636	A2	20020328	WO 2001-US29432	20010920
WO 2002024636	A3	20020926		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002055631	A1	20020509	US 2001-935581	20010824
AU 2001091151	A5	20020402	AU 2001-91151	20010920
EP 1318978	A2	20030618	EP 2001-971244	20010920
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:  
 US 2000-666508 A 20000920  
 US 2001-935581 A 20010824  
 WO 2001-US29432 W 20010920

OTHER SOURCE(S): MARPAT 136:279215  
 GI



II

AB N-aryl- and N-heteroarylcarbonyl benzenesulfonamides I [A = (un)substituted Ph, 5- or 6-membered heterocyclic ring with 1-3 N, O, or S atoms; R1 = alkyl, haloalkyl, NO<sub>2</sub>, NR<sub>6</sub>R<sub>7</sub>; R2, R3 = H, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, etc.; R4 = aryl, arylalkenyl, arylalkoxy, cycloalkenyl, cycloalkyl, halo, heterocyclyl, heterocycliloxy; R5 = H, alkyl, halo; R6, R7 = H, alkenyl, alkoxyalkyl, alkoxyalkonylalkyl, alkyl, heterocyclyl, etc.; R<sub>6</sub>R<sub>7</sub>N = imidazolyl, morpholinyl, piperazinyl, piperidinyl, pyrrolidinyl, etc.] are prepd. Over 500 I are prepd. E.g., N-biphenylcarbonyl benzenesulfonamide II was prepd. by Pd-catalyzed coupling of 4-FC<sub>6</sub>H<sub>4</sub>B(OH)<sub>2</sub> and 4-BrC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me, hydrolysis of the ester with LiOH, acylation of 4-chloro-3-nitrobenzenesulfonamide with the resulting acid in the presence of EDCI and DMAP, and nucleophilic arom. substitution of the chlorobenzenesulfonamide with 2,2-dimethylcyclopentylamine. Compds. of the invention inhibit Bcl-X<sub>1</sub> with IC<sub>50</sub> values between 0.011 μM and 10 μM, and inhibit Bcl-2 with IC<sub>50</sub> values between 0.017 μM and 10 μM.

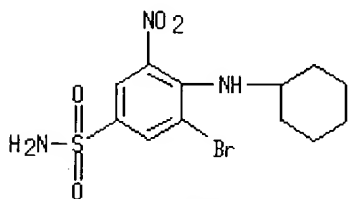
## IT 406232-68-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of N-aryl- and heteroarylcarbonyl benzenesulfonamide inhibitors of Bcl-X<sub>1</sub> and Bcl-2 as promoters of apoptosis)

RN 406232-68-6 HCAPLUS

CN Benzenesulfonamide, 3-bromo-4-(cyclohexylamino)-5-nitro- (9CI) (CA INDEX NAME)



L6 ANSWER 10 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER:

2001:63820 HCAPLUS

DOCUMENT NUMBER:

134:131318

TITLE:

Preparation of (phenylamino)benzenesulfonamides and (phenylamino)benzamides as MEK inhibitors for the treatment of chronic pain

INVENTOR(S):

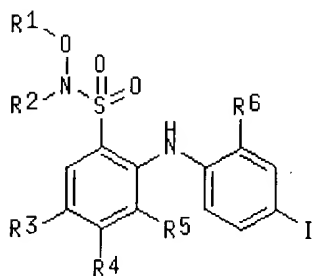
Bridges, Alexander James; Booth, Richard John; Tecle,



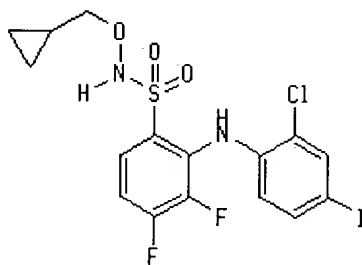
Haile; Scaggs, Yvonne; Kaufman, Michael; Barrett,  
 Stephen Douglas; Dixon, Alistair; Lee, Kevin; Pinnock,  
 Robert Denham  
 PATENT ASSIGNEE(S): Warner-Lambert Company, USA  
 SOURCE: PCT Int. Appl., 158 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005393	A2	20010125	WO 2000-US18348	20000705
WO 2001005393	A3	20010510		
W: AE, AG, AL, AU, BA, BB, BG, BR, BZ, CA, CN, CR, CU, CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, MZ, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1202724	A2	20020508	EP 2000-945140	20000705
EP 1202724	B1	20031001		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
TR 200200205	T2	20020621	TR 2002-200200205	20000705
AT 250932	E	20031015	AT 2000-945140	20000705
PT 1202724	T	20040227	PT 2000-945140	20000705
ZA 2001009909	A	20030228	ZA 2001-9909	20011130
PRIORITY APPLN. INFO.:				
			US 1999-144280P	P 19990716
			US 1999-144320P	P 19990716
			US 1999-144419P	P 19990716
			US 1999-144655P	P 19990716
			US 1999-144658P	P 19990716
			US 1999-144659P	P 19990716
			WO 2000-US18348	W 20000705

OTHER SOURCE(S): MARPAT 134:131318  
 GI



I



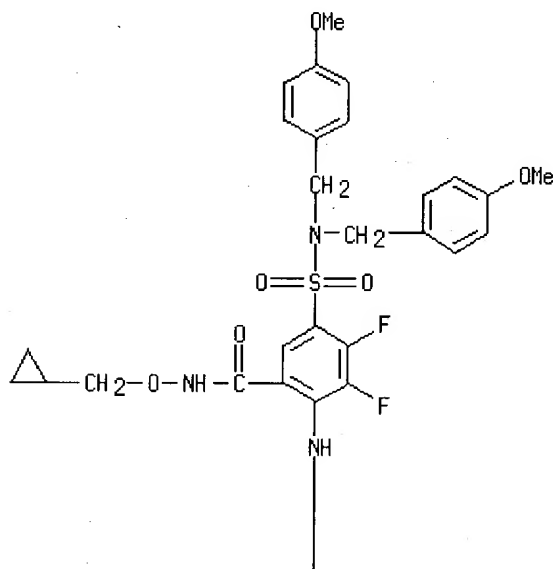
II

AB The title compds. (I) [wherein R1 = H, (phenyl)alkyl, (phenyl)alkenyl, (phenyl)alkynyl, cycloalkyl, Ph, cycloalkylalkyl, cycloalkylalkenyl, cycloalkylalkynyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkenyl, heterocyclylalkynyl, alkoxyalkyl, phenoxyalkyl, (un)substituted aminoalkyl, piperidinoalkyl, morpholinoalkyl, or alkylpiperazinoalkyl; R2 = H, (cyclo)alkyl, Ph, heterocyclyl, or cycloalkylmethyl; R3 and R4 = independently H, F, NO2, Br, or Cl; R5 = H or F; R6 = H, F, Cl, or Me] were prepd. for the treatment of chronic pain. For example,

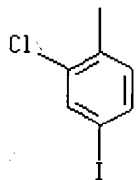
2,3,4-trifluorobenzenesulfonyl chloride was amidated O-cyclopropylmethylhydroxylamine•HCl in CH<sub>2</sub>Cl<sub>2</sub> using diisopropylethylamine (68%). Coupling with 2-chloro-4-iodoaniline in THF in the presence of Li bis(trimethylsilyl)amide afforded PD 297447 (II) in 73% yield. The APK IC<sub>50</sub> for PD 297447 was 0.965 μM. Intrathecally administered II (30 μg) showed no significant effect on allodynia in the CCI model of neuropathic pain in rats, perhaps due to low affinity or soly. of the compd. However, related MEK inhibitors with higher affinities exerted an antiallodynic effect in CCI-induced neuropathic rats.

IT **285127-11-9P**, 5-Bis(4-methoxybenzyl)sulfamoyl-2-(2-chloro-4-iodophenylamino)-N-cyclopropylmethoxy-3,4-difluorobenzamide  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (intermediate; prepn. of (phenylamino)benzenesulfonamides and (phenylamino)benzamides as MEK inhibitors for treatment of chronic pain)  
 RN **285127-11-9** HCAPLUS  
 CN Benzamide, 5-[[bis[(4-methoxyphenyl)methyl]amino]sulfonyl]-2-[(2-chloro-4-iodophenyl)amino]-N-(cyclopropylmethoxy)-3,4-difluoro- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L6 ANSWER 11 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

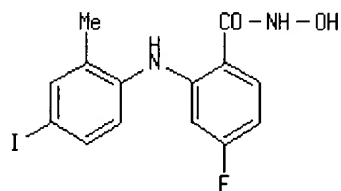
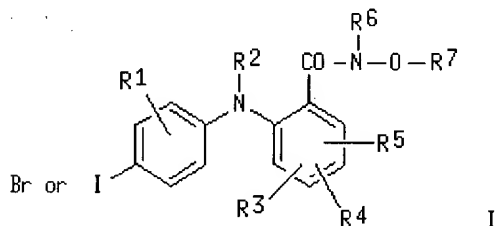
Full Text	Citing References
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ACCESSION NUMBER: 2001:63819 HCAPLUS

DOCUMENT NUMBER: 134:131317

TITLE: Preparation of 2-phenylaminobenzamides and analogs as  
 MEK inhibitors for the treatment of chronic pain  
 INVENTOR(S): Dixon, Alistair; Lee, Kevin; Pinnock, Robert Denham  
 PATENT ASSIGNEE(S): Warner-Lambert Company, USA  
 SOURCE: PCT Int. Appl., 132 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005392	A2	20010125	WO 2000-US18347	20000705
WO 2001005392	A3	20010719		
W: AE, AG, AL, AU, BA, BB, BG, BR, BZ, CA, CN, CR, CU, CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, MZ, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG TR 200200082 T2 20020422 TR 2002-20020008220000705 EP 1202726 A2 20020508 EP 2000-943383 20000705 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL NZ 515567 A 20040326 NZ 2000-515567 20000705 ZA 2001009907 A 20030228 ZA 2001-9907 20011130 PRIORITY APPLN. INFO.: US 1999-144292P P 19990716 WO 2000-US18347 W 20000705 OTHER SOURCE(S): MARPAT 134:131317 GI				



AB The title compds. (I) [wherein R1 = H, OH, alkyl, alkoxy, halo, CF3, or CN; R2 = H; R3, R4, and R5 = independently H, OH, halo, CF3, alkyl, alkoxy, NO2, CN, or (O or NH)m(CH2)nR9; R9 = H, OH, CO2H, or NR10R11; m = 0 or 1; n = 0-4; R10 and R11 = independently H, alkyl, or taken together with the N to which they are attached form a heterocycle; R6 = H, (cyclo)alkyl, acyl, aryl, or aralkyl; R7 = H, (cyclo)alkyl, alkenyl, alkynyl, or heterocyclyl] were prepd. using conventional and combinatorial

synthetic methods for the treatment of chronic pain. For example, 2,4-difluorobenzoic acid in THF was added to a soln. of 2-amino-5-iodotoluene and Li diisopropylamide in THF/heptane/EtPh to give 4-fluoro-2-(4-iodo-2-methylphenylamino)benzoic acid (47%). Treatment of the acid with O-(tetrahydro-2H-pyran-2-yl)hydroxylamine and diisopropylethylamine in THF/CH<sub>2</sub>Cl<sub>2</sub> in the presence of PyBOP afforded the O-protected intermediate, which was dissolved in ethanolic HCl to give the title N-hydroxybenzamide (II) in 23% yield. Biol. assays indicated that MEK inhibitors exert an antiallodynic effect in CCI-induced neuropathic rats when administered intrathecally and that the antiallodynic effect correlates with the affinity of the compds.

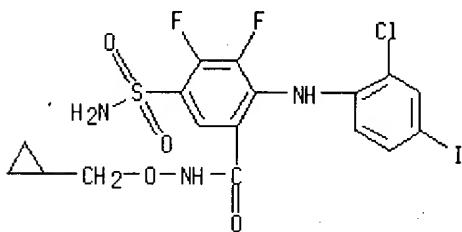
## IT 285125-85-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(prepn. of 2-phenylaminobenzamide and 2-phenylaminobenzoic acid MEK inhibitors by conventional and combinatorial synthetic methods for treatment of chronic pain)

RN 285125-85-1 HCAPLUS

CN Benzamide, 5-(aminosulfonyl)-2-[(2-chloro-4-iodophenyl)amino]-N-(cyclopropylmethoxy)-3,4-difluoro- (9CI) (CA INDEX NAME)



L6 ANSWER 12 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

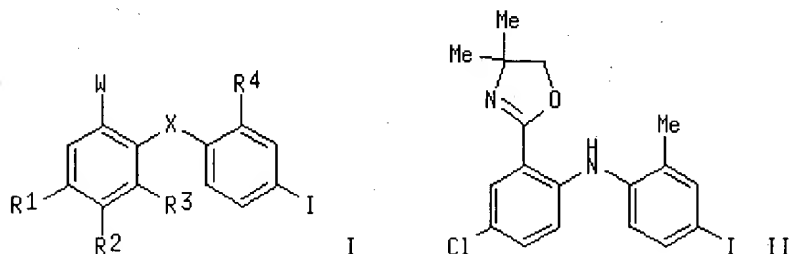
Full Text Citing References

ACCESSION NUMBER: 2001:63818 HCAPLUS  
 DOCUMENT NUMBER: 134:131540  
 TITLE: Preparation of (2-heterocyclylphenyl)(4-iodophenyl)amines as MEK inhibitors for the treatment of chronic pain  
 INVENTOR(S): Barrett, Stephen Douglas; Bridges, Alexander James; Tecle, Haile; Dixon, Alistair; Lee, Kevin; Pinnock, Robert Denham; Zhang, Lu-Yan  
 PATENT ASSIGNEE(S): Warner-Lambert Company, USA  
 SOURCE: PCT Int. Appl., 104 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005391	A2	20010125	WO 2000-US18346	20000705
WO 2001005391	A3	20010719		

W: AE, AG, AL, AU, BA, BB, BG, BR, BZ, CA, CN, CR, CU, CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, MZ, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1202732 A2 20020508 EP 2000-943382 20000705  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL  
 TR 200200204 T2 20021121 TR 2002-20020020420000705  
 ZA 2001009903 A 20030228 ZA 2001-9903 20011130  
 PRIORITY APPLN. INFO.: US 1999-144403P P 19990716  
 WO 2000-US18346 W 20000705  
 OTHER SOURCE(S): MARPAT 134:131540  
 GI



AB The title compds. (I) [wherein W = a variety of (un)substituted heterocycles; X = NRF; RF = H or (un)substituted alkyl; R1 and R2 = independently H, F, NO<sub>2</sub>, Br, Cl, or taken together with the benzene ring to which they are attached form an (un)substituted (iso)indole, benzofuran, benzothiophene, indazole, benzimidazole, or benzthiazole ring; or R1 = SO<sub>2</sub>NRGRH; R3 H or F; R4, RH, and R4 = independently H, Cl, or Me; R5 = H or (un)substituted alkyl] were prepd. for the treatment of chronic pain. For example, cycloaddn. of 2-amino-2-methyl-1-propanol with 5-chloro-2-methoxybenzoic acid using SOCl<sub>2</sub> in CH<sub>2</sub>Cl<sub>2</sub> gave 2-(5-chloro-2-methoxyphenyl)-4,4-dimethyl-4,5-dihydrooxazole (77%). Treatment with 4-iodo-2-methylaniline in THF in the presence of LDA afforded the diphenylamine (II) in 77% yield. Biol. assays indicated that MEK inhibitors exert an antiallodynic effect in CCI-induced neuropathic rats when administered intrathecally, and that the antiallodynic effect correlates with the affinity of the compds.

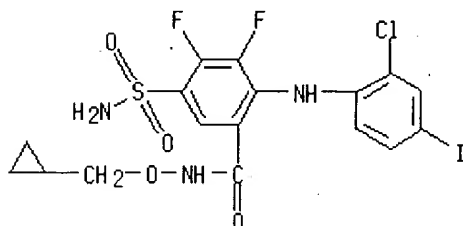
IT 285125-85-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(prepn. of (2-heterocyclylphenyl)(4-iodophenyl)amines as MEK inhibitors for treatment of chronic pain)

RN 285125-85-1 HCAPLUS

CN Benzamide, 5-(aminosulfonyl)-2-[(2-chloro-4-iodophenyl)amino]-N-(cyclopropylmethoxy)-3,4-difluoro- (9CI) (CA INDEX NAME)

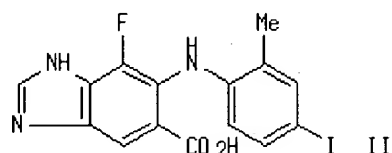
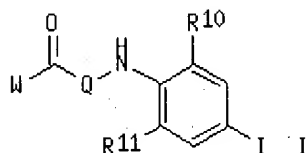


L6 ANSWER 13 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 2001:63817 HCAPLUS  
DOCUMENT NUMBER: 134:131530  
TITLE: Preparation of phenylaminobenzimidazoles and analogs as MEK inhibitors for the treatment of chronic pain  
INVENTOR(S): Barrett, Stephen Douglas; Bridges, Alexander James; Tecle, Haile; Dixon, Alistair; Lee, Kevin; Pinnock, Robert Denham  
PATENT ASSIGNEE(S): Warner-Lambert Company, USA  
SOURCE: PCT Int. Appl., 88 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005390	A2	20010125	WO 2000-US18345	20000705
WO 2001005390	A3	20010517		
W: AE, AG, AL, AU, BA, BB, BG, BR, BZ, CA, CN, CR, CU, CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, MZ, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1202731	A2	20020508	EP 2000-947013	20000705
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
ZA 2001009906	A	20030228	ZA 2001-9906	20011130
PRIORITY APPLN. INFO.:				
			US 1999-144418P	P 19990716
			WO 2000-US18345	W 20000705
OTHER SOURCE(S): MARPAT 134:131530				
GI				



AB The title compds. (I) [wherein W = OR<sub>1</sub>, NR<sub>2</sub>OR<sub>1</sub>, NRAR<sub>B</sub>, NR<sub>2</sub>NRAR<sub>B</sub>, O(CH<sub>2</sub>)<sub>2</sub>-4NRAR<sub>B</sub>, or NR<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>-4NRAR<sub>B</sub>; R<sub>1</sub> = H, (phenyl)alkyl, (phenyl)alkenyl, (phenyl)alkynyl, cycloalkyl, cycloalkylalkyl, cycloalkylalkenyl, cycloalkylalkynyl, heterocyclyl, heterocyclylalkyl, heterocyclylalkenyl, heterocyclylalkynyl, or (CH<sub>2</sub>)<sub>2</sub>-4NRCRD; R<sub>2</sub> = H, (cyclo)alkyl, Ph, heterocyclyl, or cycloalkylmethyl; RA = H, (cycloalkyl)alkyl, (cycloalkyl)alkenyl, (cycloalkyl)alkynyl, cycloalkyl, Ph, heterocyclyl, heterocyclylalkyl, aminosulfonylphenyl(alkyl), aminosulfonyl(cyclo)alkyl, aminosulfonylcycloalkylalkyl, or (CH<sub>2</sub>)<sub>2</sub>-4NRCRD; RB, RC, and RD = independently H, (cyclo)alkyl, alkenyl, alkynyl, or Ph; or NRCRD = morpholinyl, piperizinyl, pyrrolidinyl, or piperidinyl; Q = a variety of (un)substituted benzo-fused heterocycles; R<sub>10</sub> and R<sub>11</sub> = independently H, Me, halo, or NO<sub>2</sub>] were prepd. for the treatment of chronic pain. For example, cycloaddn. of Me 4,5-diamino-3-fluoro-2-(2-

methylphenylamino)benzoate (5-step prepn. given) with formic acid gave Me 7-fluoro-6-(2-methylphenylamino)-1H-benzimidazole-5-carboxylate (87%). Iodination using benzyltrimethylammonium dichloriodinate and ZnCl<sub>2</sub> in AcOH (68%) and deesterification using potassium trimethylsilanolate in THF afforded PD 205293 (II) in 9% yield. II displayed an APK IC<sub>50</sub> of 14 nM and an IC<sub>50</sub> ≥ 10 μM against colon 26 cells. Biol. assays indicated that MEK inhibitors exert an antiallodynic effect in CCI-induced neuropathic rats when administered intrathecally and that the antiallodynic effect correlates with the affinity of the compds.

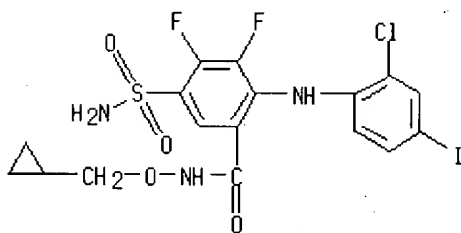
IT 285125-85-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(prepn. of phenylaminobenzimidazoles and analogs as MEK inhibitors for treatment of chronic pain)

RN 285125-85-1 HCAPLUS

CN Benzamide, 5-(aminosulfonyl)-2-[(2-chloro-4-iodophenyl)amino]-N-(cyclopropylmethoxy)-3,4-difluoro- (9CI) (CA INDEX NAME)



L6 ANSWER 14 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 2000:493507 HCAPLUS  
 DOCUMENT NUMBER: 133:120145  
 TITLE: Preparation of benzenesulfonamides as MEK inhibitors  
 INVENTOR(S): Barrett, Stephen Douglas; Tecle, Haile; Booth, Richard John  
 PATENT ASSIGNEE(S): Warner-Lambert Company, USA  
 SOURCE: PCT Int. Appl., 74 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000042003	A1	20000720	WO 1999-US30435	19991221
W: AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2000212157	A2	20000802	JP 1999-53632	19990302
EP 1144371	A1	20011017	EP 1999-966496	19991221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9916885	A	20011120	BR 1999-16885	19991221

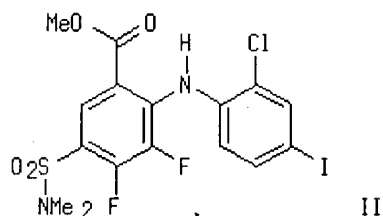
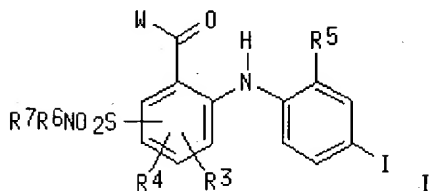
US 6440966	B1	20020827	US 2001-869639	20010702
US 2003092748	A1	20030515	US 2002-198561	20020718
US 6750217	B2	20040615		

PRIORITY APPLN. INFO.:

US 1999-115874P	P	19990113
US 1999-122422P	P	19990302
WO 1999-US30435	W	19991221
US 2001-869639	A3	20010702

OTHER SOURCE(S): MARPAT 133:120145

GI



AB The title compds. [I; W = OR<sub>1</sub>, NR<sub>2</sub>OR<sub>1</sub>, etc.; R<sub>1</sub> = H, alkyl, alkenyl, etc.; R<sub>2</sub> = H, Ph, alkyl, etc.; R<sub>3</sub> = H, F, Cl, Br, NO<sub>2</sub>; R<sub>4</sub> = H, F; R<sub>5</sub> = H, Me, Cl; R<sub>6</sub> = H, alkyl, hydroxyethyl, etc.; R<sub>7</sub> = H, alkyl, hydroxyethyl, etc.] which are inhibitors of MEK, and are effective in the treatment of proliferative diseases, cancer, stroke, heart failure, xenograft rejection, arthritis, cystic fibrosis, hepatomegaly, cardiomegaly, Alzheimer's disease, complications of diabetes, septic shock, and viral infection, were prepd. E.g, a multi-step synthesis of II which showed IC<sub>50</sub> of 222 nM (APK), was given.

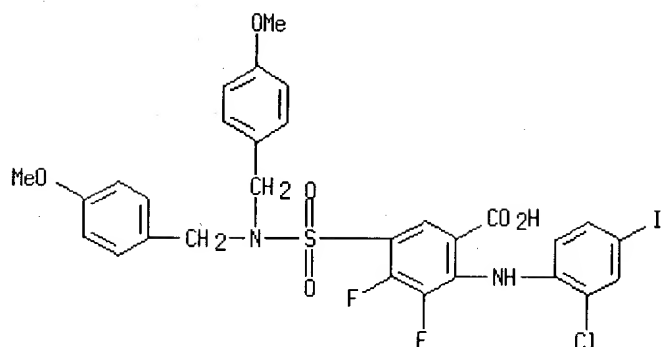
IT **285126-98-9P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(prepn. of benzenesulfonamides as MEK inhibitors)

RN 285126-98-9 HCAPLUS

CN Benzoic acid, 5-[[bis[(4-methoxyphenyl)methyl]amino]sulfonyl]-2-[(2-chloro-4-iodophenyl)amino]-3,4-difluoro- (9CI) (CA INDEX NAME)





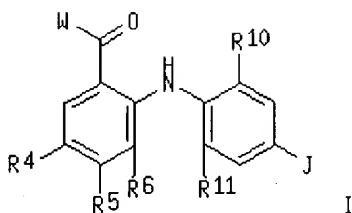
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 2000:493286 HCAPLUS  
 DOCUMENT NUMBER: 133:104874  
 TITLE: Preparation of arylaminobenzoates and related compounds as MEK inhibitors.  
 INVENTOR(S): Tecle, Haile; Barrett, Stephen Douglas  
 PATENT ASSIGNEE(S): Warner-Lambert Company, USA  
 SOURCE: PCT Int. Appl., 56 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041505	A2	20000720	WO 1999-US30491	19991221
WO 2000041505	A3	20001019		
W: AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2000212141	A2	20000802	JP 1999-53610	19990302
EP 1150950	A2	20011107	EP 1999-968160	19991221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9916857	A	20011204	BR 1999-16857	19991221
JP 2002534446	T2	20021015	JP 2000-593128	19991221
PRIORITY APPLN. INFO.:				
			US 1999-115876P	P 19990113
			US 1999-122583P	P 19990302
			WO 1999-US30491	W 19991221
OTHER SOURCE(S): MARPAT 133:104874				
GI				



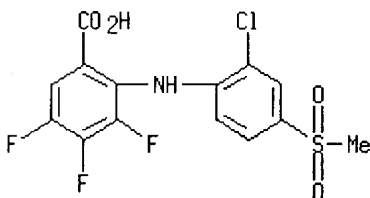
AB Title compds. [I; W = OR<sub>1</sub>, NR<sub>2</sub>OR<sub>1</sub>, NRaRb, etc.; R<sub>1</sub> = alkyl, alkenyl, alkynyl, cycloalkyl, Ph, etc.; R<sub>2</sub> = H, Ph, alkyl, alkynyl, cycloalkyl, cycloalkylalkyl; Ra = H, alkyl, alkenyl, alkynyl, cycloalkyl, Ph, etc.; Rb = H, alkyl, alkenyl, alkynyl, cycloalkyl, Ph; J = SRC, ORc, SO<sub>2</sub>Rc, SORc, alkyl, alkenyl, alkynyl, cycloalkyl, etc.; Rc = H, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, etc.; R<sub>4</sub>-R<sub>6</sub> = H, Cl, F, Br; R<sub>10</sub> = H, alkyl, halo, NO<sub>2</sub>, aminosulfonyl; R<sub>11</sub> = H, halo, NO<sub>2</sub>], were prepd. for treatment of proliferative disease (no data). Thus, 2-chloro-4-iodoaniline in THF at -78° was treated with LiN(SiMe<sub>3</sub>)<sub>2</sub> in THF followed by addn. of lithiated N-cyclopropylmethoxy-2,3,4-trifluorobenzenesulfonamide (prepn. given) in THF and stirring for 1 h in the absence of cooling to give 2-(2-chloro-4-iodophenylamino)-N-cyclopropylmethoxy-3,4-difluorobenzenesulfonamide.

IT **283601-83-2P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of arylaminobenzoates and related compds. as MEK inhibitors)

RN **283601-83-2** HCAPLUS

CN Benzoic acid, 2-[[2-chloro-4-(methanesulfonyl)phenyl]amino]-3,4,5-trifluoro-  
(9CI) (CA INDEX NAME)



L6 ANSWER 16 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 2000:211453 HCAPLUS

DOCUMENT NUMBER: 132:334422

TITLE: Effect of methanesulfonyl group on the regioselectivity of photocyclization of arylheteroarylamine derivatives

AUTHOR(S): Frolov, A. N.

CORPORATE SOURCE: St. Petersburg State Institute of Technology, St. Petersburg, Russia

SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (1999), 69(8), 1254-1261  
CODEN: RJGCEK; ISSN: 1070-3632

PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 132:334422

AB Irradn. of arylheteroarylamines with a methanesulfonyl leaving group ortho to the amino group produces nonselective cyclization to form either a C-C

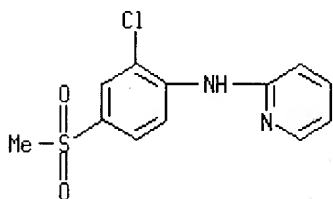
(arylpyridylamines) or a C-N (arylpyrimidylamines) bond. When the methanesulfonyl group is a substituent and chlorine is the leaving group, regioselective photocyclization is obsd. with C-N bond formation. New pyrido- and pyrimido[1,2-a]benzimidazole derivs. with a methanesulfonyl group in the benzene ring, as well as pyrimido[1,2-a]perimidine derivs., are described. The different regioselectivity of photocyclization of these classes of compds. is explained in terms of radical-cation and electrocyclic reaction mechanisms.

IT 267417-75-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(effect of methanesulfonyl group on regioselectivity of  
photocyclization of arylheteroarylamine)

RN 267417-75-4 HCAPLUS

CN 2-Pyridinamine, N-[2-chloro-4-(methanesulfonyl)phenyl]- (9CI) (CA INDEX  
NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 17 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

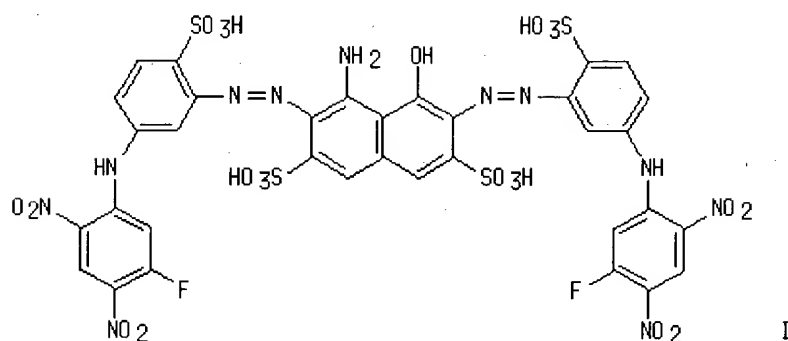
Full Text	Citing References
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ACCESSION NUMBER: 1999:355837 HCAPLUS  
DOCUMENT NUMBER: 131:6563  
TITLE: Preparation of reactive dyes containing a halobenzene  
nucleus  
INVENTOR(S): Taylor, John Anthony; Rabjohns, Michael Alan  
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany  
SOURCE: PCT Int. Appl., 121 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9927019	A2	19990603	WO 1998-GB3406	19981112
WO 9927019	A3	19990715		
W: BR, CN, ID, JP, KR, TR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1029002	A2	20000823	EP 1998-952935	19981112
EP 1029002	B1	20040512		
R: CH, DE, ES, GB, IT, LI, PT				
JP 2001524570	T2	20011204	JP 2000-522167	19981112
EP 1333062	A1	20030806	EP 2003-7521	19981112
R: CH, DE, ES, GB, IT, LI, PT				
CN 1121456	B	20030917	CN 1998-811133	19981112
TW 508365	B	20021101	TW 1998-87121801	19981229
US 6399751	B1	20020604	US 2000-554325	20000724
US 2003191293	A1	20031009	US 2002-117279	20020408

US 2003158395	A1	20030821	US 2002-158879	20020603
PRIORITY APPLN. INFO.:			GB 1997-23924	A 19971112
			EP 1998-952935	A3 19981112
			WO 1998-GB3406	W 19981112
			US 2000-554325	A3 20000724

OTHER SOURCE(S): MARPAT 131:6563  
GI



I

AB Reactive dyes having at least one halobenzene nucleus linked to a chromophoric group via an amino linkage and addnl. contg. a second reactive group were prepd. E.g., fluorodinitrophenyl-substituted azo dye I was prepd. The reactive dyes were used to dye textiles and may be used to prep. inks.

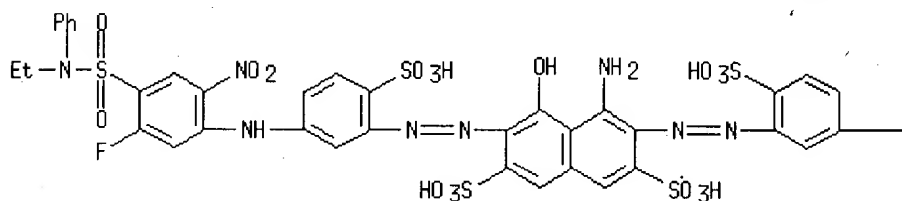
IT 225651-20-7P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (greenish-navy dye; prepn. of reactive dyes contg. a halobenzene nucleus)

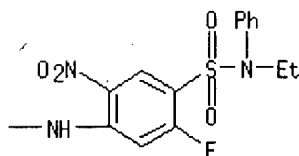
RN 225651-20-7 HCAPLUS

CN 2,7-Naphthalenedisulfonic acid, 4-amino-3,6-bis[[5-[[4-[(ethylphenylamino)sulfonyl]-5-fluoro-2-nitrophenyl]amino]-2-sulphophenyl]azo]-5-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L6 ANSWER 18 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 1995:793200 HCAPLUS  
 DOCUMENT NUMBER: 123:278586  
 TITLE: Quantitative structure-activity relationships of fluazinam and related fungicidal N-phenylpyridinamines. Preventive activity against Botrytis cinerea  
 AUTHOR(S): Akagi, Toshio; Mitani, Shigeru; Komyoji, Terumasa; Nagatani, Kuniaki  
 CORPORATE SOURCE: Cent. Res. Inst., Ishihara Sangyo Kaisha Ltd., Kusatsu, 525, Japan  
 SOURCE: Nippon Noyaku Gakkaishi (1995), 20(3), 279-90  
 CODEN: NNGADV; ISSN: 0385-1559  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

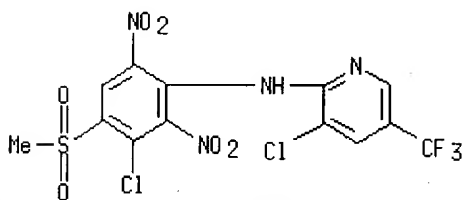
AB Fluazinam was selected after lead optimization of N-phenylpyridinamine skeleton which was obtained by lead development from acaricidal compd. The preventive activity against B. cinerea of N-phenylpyridinamines was analyzed by the technique of QSAR (ALS method) to elucidate the role of substituents on both of the pyridine and benzene rings, and also to obtain suggestion about the mode of action of this series of compds. Structure-activity relationships on the substituents of the pyridine ring were explained by the combination of elec., steric and hydrophobic parameters, while those on the substituents of the benzene ring were rather complicated. Instead, the MO calcns. (AM1) suggested that the reactivity of the chlorine atom at the meta position of the benzene ring seemed to be correlated with the activity very well. Some mol. properties of several fungicidal compds. with clear mode of actions were calcd. As a result, the LUMO levels of fluazinam was very similar to the characteristically low LUMO levels of sulfhydryl-enzyme inhibitors and uncouplers. The results of this study revealed that the substitution pattern of fluazinam was the most desirable. The suggestion that some reaction of fluazinam with SH- or other groups might be involved in the mode of action of this compd. was obtained.

IT 133230-03-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (quant. structure-activity relationships of fluazinam and related compds. against Botrytis cinerea)

RN 133230-03-2 HCAPLUS

CN 2-Pyridinamine, 3-chloro-N-[3-chloro-4-(methylsulfonyl)-2,6-dinitrophenyl]-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)



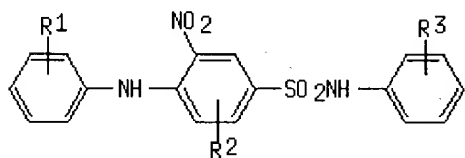
L6 ANSWER 19 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
 Text References

ACCESSION NUMBER: 1993:49271 HCAPLUS  
 DOCUMENT NUMBER: 118:49271  
 TITLE: Yellow-tone color toner compositions containing anilinobenzenesulfonanilides for electrostatography  
 INVENTOR(S): Koshida, Hitoshi; Aida, Isamu; Tanaka, Hironori  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04247464	A2	19920903	JP 1991-11961	19910201
PRIORITY APPLN. INFO.: GI			JP 1991-11961	19910201



AB Yellow-tone color toner compns. contg. the title compds. I (R1-3 = H, alkyl, halo) are claimed. The toner compns. are readily molten and mixed, and provide lemon-yellow light-stable images with fine reproducibility of the d.

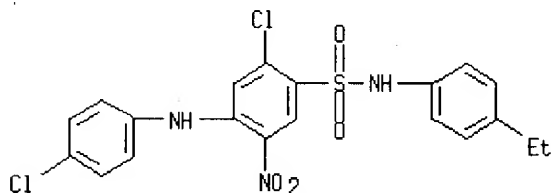
IT 145305-19-7

RL: USES (Uses)

(electrophotog. yellow toner compns. contg., light-stable images from)

RN 145305-19-7 HCAPLUS

CN Benzenesulfonamide, 2-chloro-4-[(4-chlorophenyl)amino]-N-(4-ethylphenyl)-5-nitro- (9CI) (CA INDEX NAME)

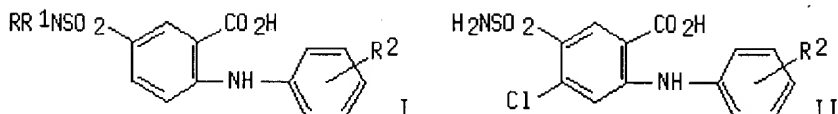


L6 ANSWER 20 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full  
Text

Citing  
References

ACCESSION NUMBER: 1992:193621 HCAPLUS  
 DOCUMENT NUMBER: 116:193621  
 TITLE: Reactivity of derivatives of phenylanthranilic acid.  
 IX. Acid-base properties of sulfamoyl derivatives of  
 phenylanthranilic acid in dioxane-water  
 AUTHOR(S): Gaidukevich, A. N.; Svechnikova, E. N.; Kolesnik, S.  
 V.; Dynnik, E. V.; Vydashenko, V. N.; Leonova, S. G.  
 CORPORATE SOURCE: Kharkov Inst. Pharm., Kharkov, USSR  
 SOURCE: Organic Reactivity (Tartu) (1990), 27(3-4), 152-8  
 CODEN: ORREDZ; ISSN: 0131-8314  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



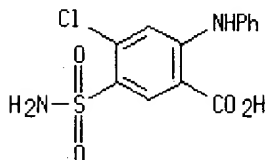
AB The pKa values of title compds. I (R = R1 = H, Me, Et; R = H, R1 = Me, Bu; R2 = H, 2-Me or 4-Me or -OMe, etc.) and II (same R2) were detd. in 60% dioxane-H2O, and Hammett correlations were obtained. A single correlation equation, including consts. for substituents in the anthranilic ( $\sigma$ ) and N-aryl ( $\sigma'$ ) portions, was found:  $pK_a = 6.72 - 1.87\sigma - 0.73\sigma'$ .

IT 4793-69-5

RL: PRP (Properties)  
(acidity of, in dioxane-water)

RN 4793-69-5 HCAPLUS

CN Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-(phenylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 21 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER:

1991:626287 HCAPLUS

DOCUMENT NUMBER:

115:226287

TITLE:

Quantitative analysis with physicochemical substituent and molecular parameters of uncoupling activity of substituted diarylamines

AUTHOR(S):

Guo, Ze Jian; Miyoshi, Hideto; Komyoji, Terumasa; Haga, Takahiro; Fujita, Toshio

CORPORATE SOURCE:

Dep. Agric. Chem., Kyoto Univ., Kyoto, 606, Japan

SOURCE:

Biochimica et Biophysica Acta (1991), 1059(1), 91-8  
CODEN: BBACAQ; ISSN: 0006-3002

DOCUMENT TYPE:

Journal

LANGUAGE:

English

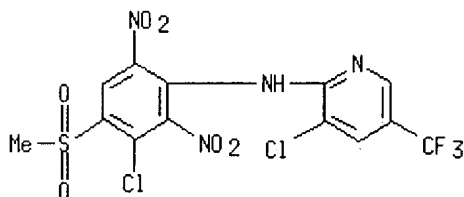
AB Variations in the uncoupling potency of a series of substituted diphenyl- and phenylpyridylamines with rat-liver mitochondria were analyzed quant. by regression anal. by use of two physicochem. parameters, log P(M/W) and log KAm. P(M/W) is the partition coeff. of compds. for incorporation into mitochondria from the aq. phase and KAm is the acid dissozn. const. in nonionic micellar system. The results of the anal. were similar to those obsd. previously for phenolic uncouplers, showing that the incorporation of compds. into the mitochondrial phase and a certain balance between neutral and ionized forms in the membranous phase were significant factors in governing the uncoupling potency. The findings were in accord with the hypothesis that the acidic uncouplers act primarily by working as protonophores in the inner mitochondrial membrane. In contrast to results obtained with phenols, however, the variations in the steric effect of the ortho substituents in shielding the neg. charged center of the ionized form did not significantly affect variations in the coupling potency of the diarylamines studied here.

IT 133230-03-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(respiration by mitochondria of liver uncoupling by, structure in relation to)

RN 133230-03-2 HCAPLUS

CN 2-Pyridinamine, 3-chloro-N-[3-chloro-4-(methylsulfonyl)-2,6-dinitrophenyl]-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)



L6 ANSWER 22 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 1991:228268 HCAPLUS

DOCUMENT NUMBER: 114:228268

TITLE: Correlation of the acid dissociation constants of some multisubstituted diphenyl- and phenylpyridylamines  
AUTHOR(S): Guo, Ze Jian; Miyoshi, Hideto; Nagatani, Kuniaki; Komyoji, Terumasa; Haga, Takahiro; Fujita, Toshio  
CORPORATE SOURCE: Dep. Agric. Chem., Kyoto Univ., Kyoto, 606, Japan  
SOURCE: Journal of Organic Chemistry (1991), 56(11), 3692-700  
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal  
LANGUAGE: English

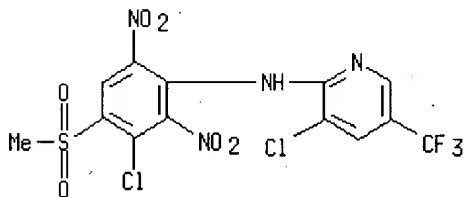
AB The acid dissocn. const. of diphenyl- and phenylpyridylamines bearing multiple electron-withdrawing substituents were measured in 1:1 ethanol/water. The ionization const. were correlated quant. by application of Hammett-Taft-type equations and regression anal. The effects of substituents crowded near each other in the vicinity of the NH bridge could be readily sepd. into electronic and steric components. The effects included those that were specific to the proximity of the substituent to the NH bridge and those that influenced the behavior of the aza functional group of the pyridinyl compds. electronically.

IT 133230-03-2

RL: PRP (Properties)  
(acid dissocn. const. of)

RN 133230-03-2 HCAPLUS

CN 2-Pyridinamine, 3-chloro-N-[3-chloro-4-(methylsulfonyl)-2,6-dinitrophenyl]-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)



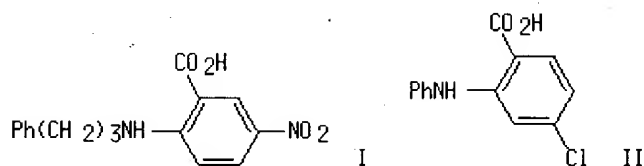
L6 ANSWER 23 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 1987:489293 HCAPLUS



DOCUMENT NUMBER: 107:89293  
 TITLE: Chloride-channel blockers in the thick ascending limb of the loop of Henle. Structure-activity relationship  
 AUTHOR(S): Wangemann, P.; Wittner, M.; Di Stefano, A.; Englert, H. C.; Lang, H. J.; Schlatter, E.; Greger, R.  
 CORPORATE SOURCE: Max-Planck-Inst. Biophys., Frankfurt/Main, D-6000, Fed. Rep. Ger.  
 SOURCE: Pfluegers Archiv (1986), 407(Suppl. 2), S128-S141  
 CODEN: PFLABK; ISSN: 0031-6768  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB On the basis of previous findings with diphenylamine-2-carboxylate a search for compds. which possess an even higher affinity for the Cl<sup>-</sup>-channels in the basolateral membrane of the thick ascending limb of the loop of Henle has been conducted. To quantify the inhibitory potency, measurements of the equiv. short circuit current, corresponding to the secondary active transport of Cl<sup>-</sup> and measurements of the voltage across the basolateral membrane have been performed. A survey of 219 compds. reveals that relatively simple modifications in the structure of diphenylamine-2-carboxylate led to very potent blockers such as 5-nitro-2-(3-phenylpropylamino)benzoate (I) which inhibits the short circuit current half maximally (IC<sub>50</sub>) at 8.10<sup>-8</sup> mol/L. Structure activity studies suggest that these Cl<sup>-</sup> channel blockers possess several sites of interaction: The neg. charged carboxylate group, the secondary amine group which probably carries a pos. partial charge, and for the very potent agents (e.g. I and 5-chlorodiphenylamine-2-carboxylic acid (II)) an addnl. neg. partial charge at the resp. -Cl or -NO<sub>2</sub> substituent. Finally, also an apolar interaction with an cycloalkyl or cycloaryl residue seems to be required, and this site of interaction has a defined spacing from the secondary amino N.

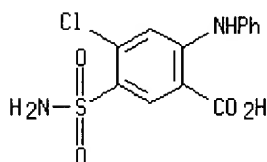
IT 4793-69-5

RL: BIOL (Biological study)

(chloride channel blocking activity of, structure in relation to)

RN 4793-69-5 HCAPLUS

CN Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-(phenylamino)- (9CI) (CA INDEX NAME)



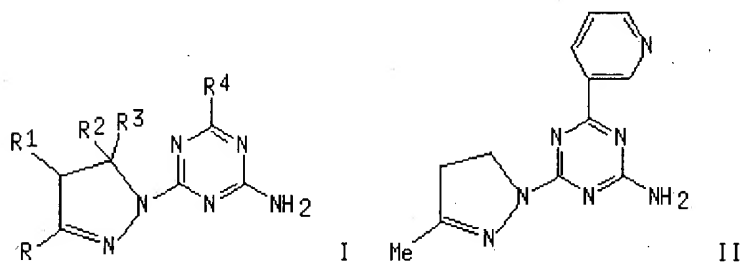
L6 ANSWER 24 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text      Citing References

ACCESSION NUMBER: 1985:542017 HCAPLUS  
 DOCUMENT NUMBER: 103:142017  
 TITLE: 2-Amino-6-(2-pyrazolino)-1,3,5-triazines  
 INVENTOR(S): Brzozowski, Zdzislaw; Angielski, Stefan; Kozakiewicz, Irena; Rogulski, Jerzy; Pomarnacka-Jankowska, Elzbieta; Kaminski, Zbigniew  
 PATENT ASSIGNEE(S): Starogardzkie Zaklady Farmaceutyczne "Polfa", Pol.; Akademia Medyczna, Gdansk  
 SOURCE: Pol., 7 pp.  
 CODEN: POXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Polish  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 123395	B1	19821030	PL 1979-217350	19790724
PRIORITY APPLN. INFO.:			PL 1979-217350	19790724

GI



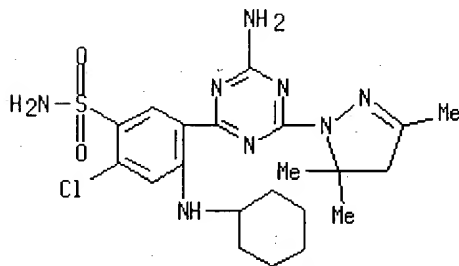
AB Title compds. I [R, R1, R2, R3 = H, C1-3 alkyl; R4 = H, C1-3 alkyl, (un)substituted Ph or pyridyl] were prepd. and had antidiabetic activity. Thus, [(3-methyl-2-pyrazolinyl)iminomethyl]guanidine, Et nicotinate, and MeONa in MeOH were refluxed 15 h to give 60% analog II.

IT 80688-03-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as antidiabetic)

RN 80688-03-5 HCAPLUS

CN Benzenesulfonamide, 5-[4-amino-6-(4,5-dihydro-3,5,5-trimethyl-1H-pyrazol-1-yl)-1,3,5-triazin-2-yl]-2-chloro-4-(cyclohexylamino)- (9CI) (CA INDEX NAME)

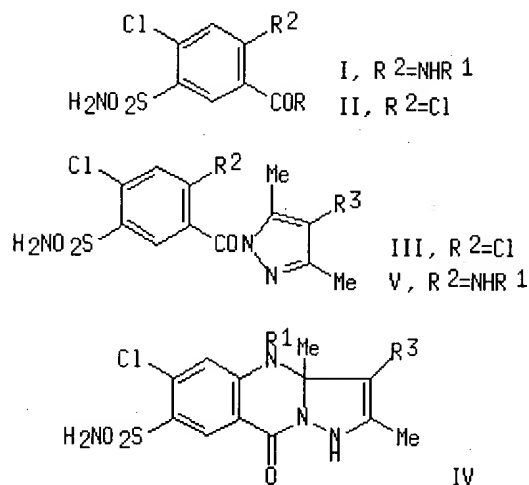


L6 ANSWER 25 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text      Citing References

ACCESSION NUMBER: 1985:166689 HCAPLUS

DOCUMENT NUMBER: 102:166689  
 TITLE: Derivatives of 4-chloro-5-sulfamoylbenzoic acid.  
 VIII. Synthesis and diuretic properties of  
 pyrazolo[3,2-b]quinazoline and 1-benzoylpyrazole  
 derivatives  
 AUTHOR(S): Pomarnacka, Elzbieta; Angielski, Stefan; Hoppe, Anzelm  
 CORPORATE SOURCE: Inst. Technol. Anal. Pharm. Prod., Sch. Med., Gdansk,  
 80-416, Pol.  
 SOURCE: Acta Poloniae Pharmaceutica (1984), 41(2), 141-51  
 CODEN: APPHAX; ISSN: 0001-6837  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Polish  
 OTHER SOURCE(S): CASREACT 102:166689  
 GI



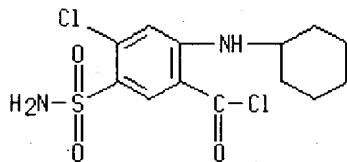
AB 3-Sulfamoylbenzhydrazide derivs. I (R = NHNH<sub>2</sub>, R<sub>1</sub> = Pr, Bu, Me<sub>2</sub>CHCH<sub>2</sub>, C<sub>6</sub>H<sub>11</sub>, PhCH<sub>2</sub>, and furfuryl) were prepd. by the reaction of I (R = OMe and OEt, R<sub>1</sub> as above) with N<sub>2</sub>H<sub>4</sub>·H<sub>2</sub>O and (or) by the reaction of II (R = NHNH<sub>2</sub>) with the appropriate R<sub>1</sub>NH<sub>2</sub> (R<sub>1</sub> as above). II (R = NHNH<sub>2</sub>) treated in the presence of Ac<sub>2</sub>O with AcCHR<sub>3</sub>Ac (R<sub>3</sub> = H, Me, and Et) yielded the corresponding pyrazole derivs. III (R<sub>3</sub> as above). III (R<sub>3</sub> = H and Me) were also prepd. from II (R = Cl) and 3,5-dimethyl- and 3,4,5-trimethylpyrazole, resp., in the presence of Et<sub>3</sub>N. When refluxed with PrNH<sub>2</sub> and BuNH<sub>2</sub> in HOCH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OMe, III gave I (R = NHPr and NHBu, resp.; R<sub>1</sub> = Pr and Bu, resp.). I (R = NHNH<sub>2</sub>) treated with AcCHR<sub>3</sub>Ac either in EtOH contg. some AcOH or in DMF acidified with 2N HCl gave 22 pyrazoloquinazolines IV (R<sub>1</sub> = PhCH<sub>2</sub>, R<sub>3</sub> = H and Me; R<sub>1</sub> = C<sub>6</sub>H<sub>11</sub> and furfuryl, R<sub>3</sub> = H, Me, and Et; R<sub>1</sub> = Pr and Bu, R<sub>3</sub> = H, Me, Et, and Pr; R<sub>1</sub> = Me<sub>2</sub>CHCH<sub>2</sub>, R<sub>3</sub> = H, Me, Et, Pr, allyl, and PhCH<sub>2</sub>). Alk. hydrolysis of IV (R<sub>1</sub> = C<sub>6</sub>H<sub>11</sub>, R<sub>3</sub> = H) gave I (R = OH, R<sub>1</sub> = C<sub>6</sub>H<sub>11</sub>). Three pyrazole derivs. V (R<sub>1</sub> = C<sub>6</sub>H<sub>11</sub>, R<sub>3</sub> = H and Me; R<sub>1</sub>=PhCH<sub>2</sub>, R<sub>3</sub> = Me) were prepd. analogously as III from I (R = Cl, R<sub>1</sub> = C<sub>6</sub>H<sub>11</sub> and PhCH<sub>2</sub>, resp.) in CHCl<sub>3</sub> in the presence of Et<sub>3</sub>N. In preliminary pharmacol. tests, all IV enhanced diuresis and electrolyte elimination in exptl. rats, the magnitude of these effects depending on the substituents R<sub>1</sub> and R<sub>3</sub>. IV (R<sub>1</sub> = furfuryl, R<sub>3</sub> = Me) with LD<sub>50</sub> >12 g/kg on oral administration to mice and diuretic activity exceeding that of hydrochlorothiazide was of particular interest; on i.v. administration to dogs (0.006-0.4 mg/kg) it was comparable to furseimide. A similar biol. activity was also obsd. with IV (R<sub>1</sub> = C<sub>6</sub>H<sub>11</sub>, R<sub>3</sub> = H).

IT 95792-31-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
(acylation by, of methylpyrazole derivs.)

RN 95792-31-7 HCAPLUS

CN Benzoyl chloride, 5-(aminosulfonyl)-4-chloro-2-(cyclohexylamino) - (9CI)  
(CA INDEX NAME)



L6 ANSWER 26 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
References

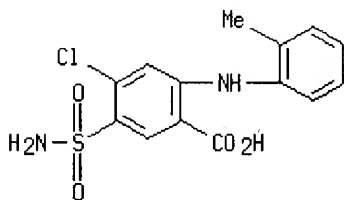
ACCESSION NUMBER: 1985:131642 HCAPLUS  
DOCUMENT NUMBER: 102:131642  
TITLE: Synthesis and biological activity of derivatives of phenylanthranilic acid  
AUTHOR(S): Gaidukevich, A. N.; Dinnik, K. V.; Konev, V. F.; Berezhnyakova, A. I.; Beletskaya, O. V.  
CORPORATE SOURCE: Kharkov Pharm. Inst., Kharkov, USSR  
SOURCE: Farmatsevtichnii Zhurnal (Kiev) (1984), (5), 42-5  
CODEN: FRZKAP; ISSN: 0367-3057  
DOCUMENT TYPE: Journal  
LANGUAGE: Ukrainian  
OTHER SOURCE(S): CASREACT 102:131642  
AB Treating 2,4-Cl<sub>2</sub>C<sub>6</sub>H<sub>3</sub>CO<sub>2</sub>H with ClSO<sub>3</sub>H at 130-135° gave 2,4,5-Cl<sub>2</sub>(ClSO<sub>2</sub>)C<sub>6</sub>H<sub>2</sub>CO<sub>2</sub>H, which condensed with RNHR<sub>1</sub> (R = R<sub>1</sub> = H, Me, Et; R = Me, R<sub>1</sub> = H) to give 75-83% 2,4,5-Cl<sub>2</sub>(RR<sub>1</sub>NSO<sub>2</sub>)C<sub>6</sub>H<sub>2</sub>CO<sub>2</sub>H (I; same RR<sub>1</sub>N). I reacted with R<sub>2</sub>NH<sub>2</sub> (R<sub>2</sub> = Ph, 2- and 4-tolyl and -MeOC<sub>6</sub>H<sub>4</sub>, 3,4-xylyl) at 125-150° in the presence of K<sub>2</sub>CO<sub>3</sub> to give ≤84% yield of 16 corresponding title compds. (II), the IR spectra of which were interpreted. II (R, R<sub>1</sub> ≠ H) had fungicidal and antiinflammatory activity.

IT 95454-01-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn., IR spectrum and pharmacol. activity of)

RN 95454-01-6 HCAPLUS

CN Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-[(2-methylphenyl)amino] - (9CI)  
(CA INDEX NAME)



L6 ANSWER 27 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

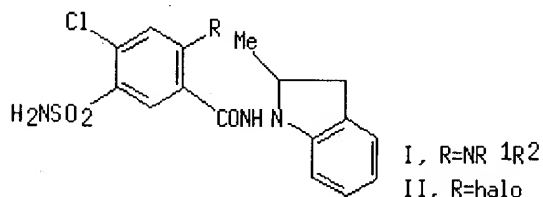
Full Text Citing  
References

ACCESSION NUMBER: 1983:558249 HCAPLUS  
DOCUMENT NUMBER: 99:158249  
TITLE: Antihypertensive sulfamoylbenzamides  
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58124767	A2	19830725	JP 1982-6752	19820121
JP 03060821	B4	19910917		

PRIORITY APPLN. INFO.: JP 1982-6752 19820121  
 OTHER SOURCE(S): CASREACT 99:158249  
 GI



AB I [R<sub>1</sub>, R<sub>2</sub> = H, (substituted) alkyl, NH<sub>2</sub>, OH, alkoxy, (substituted) phenyl] were prep'd. by condensation of II with HNRR<sub>1</sub>R<sub>2</sub>. Thus, 30 mL a soln. of 2 g II (R = Cl) in ethylcellosolve was heated at 110° for 5 h with introduction of HNMe<sub>2</sub> to give 1 g I (R<sub>1</sub> = H, R<sub>2</sub> = Me). At 30 mg/kg/day p.o. I decreased deoxycorticosterone acetate/saline-induced hypertension (183-202 mmHg) in rats by 13-21% in 5 days.

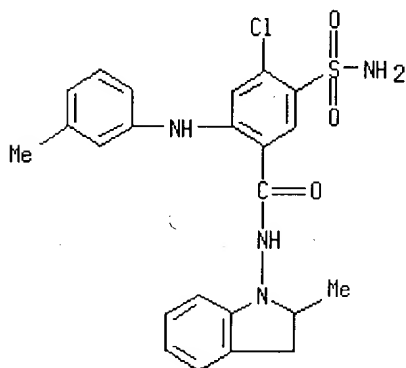
IT 87445-65-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. and antihypertensive activity of)

RN 87445-65-6 HCAPLUS

CN Benzamide, 5-(aminosulfonyl)-4-chloro-N-(2,3-dihydro-2-methyl-1H-indol-1-yl)-2-[(3-methylphenyl)amino]- (9CI) (CA INDEX NAME)



L6 ANSWER 28 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 1983:65112 HCAPLUS

DOCUMENT NUMBER: 98:65112

TITLE: Structure activity correlation for diuretic furosemide

congeners  
 AUTHOR(S): Shani, J.; Schoenberg, S.; Lien, E. J.; Cherkez, S.;  
 Feifel, M.; Schonberger, C.; Yellin, H.  
 CORPORATE SOURCE: Sch. Pharm., Hebrew Univ., Jerusalem, Israel  
 SOURCE: Pharmacology (1983), 26(3), 172-80  
 CODEN: PHMGBN; ISSN: 0031-7012  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The structure activity correlation of several groups of anthranilic acid derivs. was studied. Fifty-nine compds., most of them possessing the anthranilic acid moiety, were tested for diuretic and saluretic activities. Equations correlating the biol. activities of these compds. with their physicochem. consts. suggest pos. dependence of the diuretic activity on log P (octanol:water partition coeff.). Apparently, within limits, the variation in biol. activity is primarily governed by the lipophilicity of the mol., and further increase in log P value will not enhance this activity.

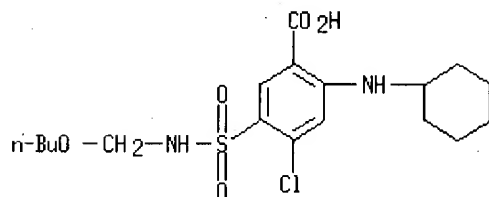
IT 40532-38-5

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(diuretic activity of, structure in relation to)

RN 40532-38-5 HCAPLUS

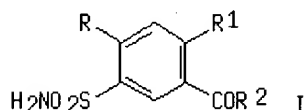
CN Benzoic acid, 5-[[[(butoxymethyl)amino]sulfonyl]-4-chloro-2-(cyclohexylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 29 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 1982:142393 HCAPLUS  
 DOCUMENT NUMBER: 96:142393  
 TITLE: Derivatives of 4-chloro-5-sulfamoylbenzoic acid. VII. Synthesis and diuretic activity of some derivatives of 2,4-diamino- and 2-amino-4-chloro-5-sulfamoylbenzamide  
 AUTHOR(S): Brzozowski, Zdzislaw; Pomarnacka-Jankowska, Elzbieta; Angielski, Stefan  
 CORPORATE SOURCE: Inst. Technol. Anal. Pharm. Prod., Sch. Med., Gdansk, 80-416, Pol.  
 SOURCE: Acta Poloniae Pharmaceutica (1981), 38(1), 11-17  
 CODEN: APPHAX; ISSN: 0001-6837  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Polish  
 OTHER SOURCE(S): CASREACT 96:142393  
 GI



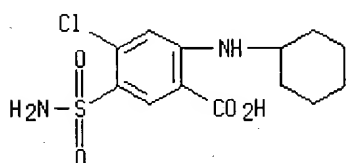
AB Benzamide I ( $R = R_1 = Cl$ ,  $R_2 = NH_2$ ) was heated at  $110^\circ$  with 10 mols  $HO(CH_2)_2NH_2$  to give 31% I ( $R = R_1 = HOCH_2CH_2NH$ ). Similarly, I ( $R = R_1 = Cl$ ,  $R_2 = EtO$ ) was treated with  $R_3NH_2$  [ $R_3 = HO(CH_2)_n$ ;  $n = 2, 3$ ] to give a mixt. of I ( $R = R_1 = Cl$ ,  $R_2 = R_3NH$ ;  $R = R_1 = R_2 = R_3NH$ ). I ( $R = Cl$ ,  $R_1 = cyclohexylamino$ ,  $R_2 = OH$ ) was treated with  $ClCO_2Et$  followed by refluxing with  $R_3NH_2$  ( $R_3 = HOCH_2CH_2$ ,  $Pr$ ,  $Me_2CH$ ,  $Bu$ ,  $Me_2CHCH_2$ ,  $PhCH_2CH_2$ ,  $2-MeO$ ,  $4-MeOC_6H_4$ ) to give 42-81% I ( $R = Cl$ ,  $R_1 = cyclohexylamino$ ,  $R_2 = R_3NH$ ). I ( $R = Cl$ ,  $R_1 = cyclohexylamino$ ,  $R_2 = Me_2CHCH_2NH$ ) inhibited diuresis in rats.

## IT 4793-39-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and amination of)

RN 4793-39-9 HCAPLUS

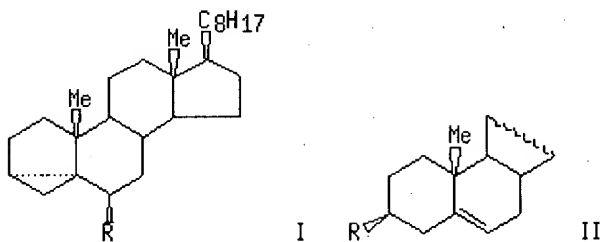
CN Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-(cyclohexylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 30 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
References

ACCESSION NUMBER: 1982:123100 HCAPLUS  
DOCUMENT NUMBER: 96:123100  
TITLE: Studies in remote functionalization. (I). Synthesis and spectroscopic studies of  $3\alpha$ ,  $5\alpha$ -cyclosteroidal substrates  
AUTHOR(S): Lee, Eun; Park, Sang Kyu; Lee, Hee Yoon; Kim, Wan Joo  
CORPORATE SOURCE: Coll. Nat. Sci., Seoul Natl. Univ., Seoul, 151, S. Korea  
SOURCE: Bulletin of the Korean Chemical Society (1981), 2(3), 105-12  
CODEN: BKCSDE; ISSN: 0253-2964  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI



AB Solvolysis of cholesterol tosylate in  $RH$  [ $R = HO$ , alkoxy,  $PhCH_2O$ ,  $HO(CH_2)_nO$  ( $n = 2, 3$ ),  $HOCH_2CH_2S$ ,  $HSCH_2CH_2S$ ,  $PhS$ ,  $PhO$ ] gave varying amts. of isocholesteryl ethers I and cholesteryl ethers II. Arom. esters of I ( $R = HOCH_2CH_2O$ ,  $HOCH_2CH_2CH_2O$ ,  $HOCH_2CH_2S$ ) were prepd. and their

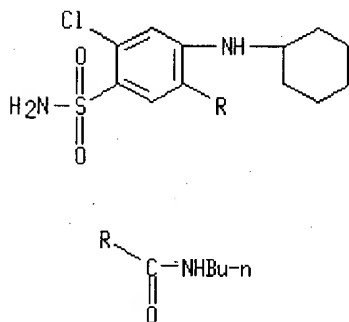
conformations were studied by NMR spectroscopy. The arom. ring in these esters, i.e. I [R = 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>], approaches the C-18 Me group and the C-17 side chain.

IT 80258-31-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and NMR spectrum of)

RN 80258-31-7 HCAPLUS

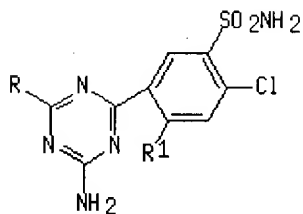
CN Benzamide, 5-(aminosulfonyl)-N-butyl-4-chloro-2-(cyclohexylamino)- (9CI)  
(CA INDEX NAME)



L6 ANSWER 31 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
References

ACCESSION NUMBER: 1982:68944 HCAPLUS  
DOCUMENT NUMBER: 96:68944  
TITLE: Derivatives of diamino-1,3,5-triazine. III.  
Synthesis and diuretic activity of some  
2,4-diamino-6-(sulfamoylphenyl)-1,3,5-triazine  
derivatives  
AUTHOR(S): Brzozowski, Zdzislaw; Kaminski, Zbigniew; Angielski,  
Stefan  
CORPORATE SOURCE: Inst. Technol. Anal. Pharm. Prod., Sch. Med., Gdansk,  
80-416, Pol.  
SOURCE: Acta Poloniae Pharmaceutica (1981), 38(1), 1-9  
CODEN: APPHAX; ISSN: 0001-6837  
DOCUMENT TYPE: Journal  
LANGUAGE: Polish  
OTHER SOURCE(S): CASREACT 96:68944  
GI



AB A series of 6 title derivs. [I, R = 1-piperidinyl, R1 = BuNH, C<sub>6</sub>H<sub>11</sub>NH, 1-pyrrolidinyl, 4-morpholinyl, HO(CH<sub>2</sub>)<sub>2</sub>NH, and HO(CH<sub>2</sub>)<sub>3</sub>NH] and 10 I (R = 3,5,5-trimethyl-2-pyrazolin-1-yl, R1 as above and also PhCH<sub>2</sub>NH, Ph(CH<sub>2</sub>)<sub>2</sub>NH, furfurylamino, and 1-piperidinyl) was prepd. in >80% crude yields by treating I (R1 = Cl) with the amine under reflux but not over 130°. I (R1 = Cl) were obtained in <45% yields in the reaction of Et 2,4-dichloro-5-sulfamoylbenzoate with H<sub>2</sub>NC(:NH)NHC(:NH)R.HCl in



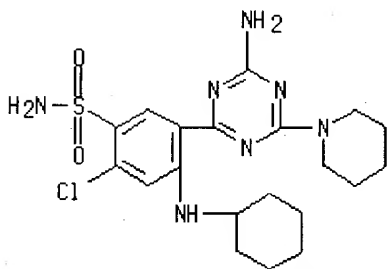
MeONa-MeOH. The position of the amino substituent in the arom. moiety of I was confirmed by an independent synthesis. The diuretic activity of I was tested in rats; I (R = 1-piperidinyl, R1 = C6H11NH), with diuretic activity equal to 92% of that of hydrochlorothiazide, was the most effective compd.

IT 80687-97-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. and diuretic activity of)

RN 80687-97-4 HCAPLUS

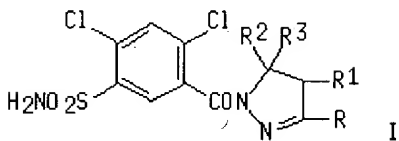
CN Benzenesulfonamide, 5-[4-amino-6-(1-piperidinyl)-1,3,5-triazin-2-yl]-2-chloro-4-(cyclohexylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 32 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 1981:480807 HCAPLUS  
DOCUMENT NUMBER: 95:80807  
TITLE: Derivatives of 4-chloro-5-sulfamoylbenzoic acid. VI. Synthesis of certain 1-(sulfamoylbenzoyl)-2-pyrazoline derivatives with expected diuretic activity  
AUTHOR(S): Brzozowski, Zdzislaw; Pomarnacka, Elzbieta  
CORPORATE SOURCE: Inst. Technol. Anal. Pharm. Prod., Sch. Med., Gdansk, 80-416, Pol.  
SOURCE: Acta Poloniae Pharmaceutica (1980), 37(4), 373-80  
CODEN: APPHAX; ISSN: 0001-6837  
DOCUMENT TYPE: Journal  
LANGUAGE: Polish  
GI



AB 2,4-Dichloro-5-sulfamoylbenzoic acid treated with SOCl2 and then with 3-methyl-, 5-methyl-, 3,5,5-trimethyl-, 3,5-diethyl-5-methyl-, and 4-methyl-5-ethyl-2-pyrazoline gave the appropriately substituted I in 66-95% yields. I heated (120-5°, 3-4 h) with 10 mol PhCH2NH2 gave products in which both Cl atoms were exchanged for the amine residue. A similar reaction with C6H11NH2 and pyrrolidine resulted in the exchange of only the 2-Cl atom. In the reaction with furfurylamine, phenethylamine, morpholine, and piperidine either one or both Cl atoms in I were exchanged, depending on the pyrazoline substitution. Twenty-two amino derivs. of I prepd. in this way revealed moderate diuretic activity. I (R

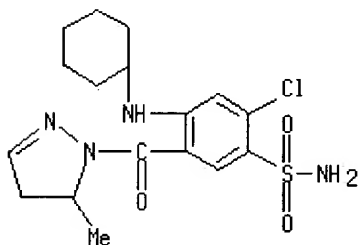
= Me, R1 = R2 = R3 = H) revealed 93% of the diuretic activity and 46% of the electrolyte excretion capacity of hydrochlorothiazide.

IT **78545-77-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN **78545-77-4** HCAPLUS

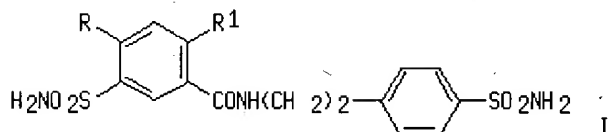
CN 1H-Pyrazole, 1-[5-(aminosulfonyl)-4-chloro-2-(cyclohexylamino)benzoyl]-4,5-dihydro-5-methyl- (9CI) (CA INDEX NAME)



L6 ANSWER 33 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
References

ACCESSION NUMBER: 1980:567833 HCAPLUS  
DOCUMENT NUMBER: 93:167833  
TITLE: Synthesis of 4-2-(2,4-dichloro-5-sulfamoylbenzamido)-ethyl benzenesulfonamide and its reactions with some amines  
AUTHOR(S): Kozakiewicz, Irena  
CORPORATE SOURCE: Inst. Technol. Anal. Pharm. Prod., Sch. Med., Gdansk, 80-416, Pol.  
SOURCE: Acta Poloniae Pharmaceutica (1979), 36(5), 523-8  
CODEN: APPHAX; ISSN: 0001-6837  
DOCUMENT TYPE: Journal  
LANGUAGE: Polish  
OTHER SOURCE(S): CASREACT 93:167833  
GI



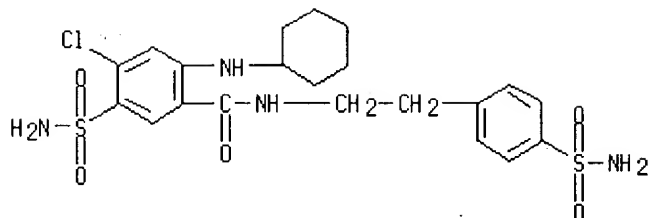
AB A Schotten-Baumann acylation of 4-H2NCH2CH2C6H4SO2NH2 with 2,4-dichloro-5-sulfamoylbenzoyl chloride in acetone gave 60% I, which, treated with amines, yielded 34-55% of 6 new I (R = R1 = 1-piperidinyl, 4-morpholinyl, PhCH2NH; R = Cl, R1 = C6H11NH, 2-furfurylamino, BuNH). Some I showed weak diuretic and hypoglycemic effects in rats.

IT **75136-46-8P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN **75136-46-8** HCAPLUS

CN Benzamide, 5-(aminosulfonyl)-N-[2-[4-(aminosulfonyl)phenyl]ethyl]-4-chloro-2-(cyclohexylamino)- (9CI) (CA INDEX NAME)



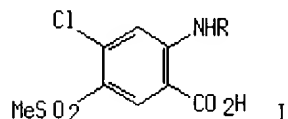
L6 ANSWER 34 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 1976:432644 HCAPLUS  
 DOCUMENT NUMBER: 85:32644  
 TITLE: 3-Amino-5-sulfonylbenzoic acids  
 INVENTOR(S): Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.  
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
 SOURCE: U.S., 14 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3953476	A	19760427	US 1974-465949	19740501
US 3780027	A	19731218	US 1970-33061	19700429
PRIORITY APPLN. INFO.:			US 1970-33061	19700429
			US 1971-212745	19711227

GI



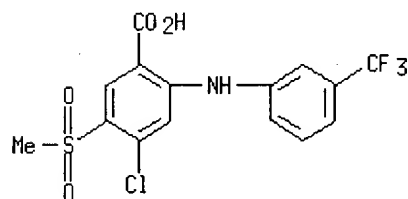
AB Aminobenzoic acids, e.g. I (R = NHCH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CF<sub>3</sub>-4, 3-pyridylmethylamino, 2-furylmethyl, CH<sub>2</sub>Ph), effective as diuretic and antihypertensive agents at dose levels of 0.01-0.3 g, were prepd. by amidation of the 2-halo analog or by alkylation of the free amino compd. Thus, furfurylamine reacted with 2,4-dichloro-5-(methylsulfonyl)benzoic acid at 125° under N for 3 hr to give 98% I (R = 2-furylmethyl).

IT 51521-83-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 51521-83-6 HCAPLUS

CN Benzoic acid, 4-chloro-5-(methylsulfonyl)-2-[[3-(trifluoromethyl)phenyl]amino]- (9CI) (CA INDEX NAME)



L6 ANSWER 35 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 1974:520696 HCAPLUS  
 DOCUMENT NUMBER: 81:120696  
 TITLE: Antihypertensive 4,6-diamino-1,3-benzenedisulfonamides  
 INVENTOR(S): Sturm, Karl; Starey, Franz  
 PATENT ASSIGNEE(S): Farbwerke Hoechst A.-G.  
 SOURCE: Ger. Offen., 22 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2239846	A1	19740214	DE 1972-2239846	19720812
NL 7310889	A	19740214	NL 1973-10889	19730807
CH 583217	A	19761231	CH 1973-11479	19730808
DD 107928	C	19740820	DD 1973-172801	19730809
AU 7359061	A1	19750213	AU 1973-59061	19730809
US 3876632	A	19750408	US 1973-386863	19730809
DD 112900	C	19750512	DD 1973-180690	19730809
ES 417700	A1	19760216	ES 1973-417700	19730809
FR 2195453	A1	19740308	FR 1973-29445	19730810
ZA 7305475	A	19741030	ZA 1973-5475	19730810
AT 7307033	A	19760415	AT 1973-7033	19730810
AT 333768	B	19761210		
JP 49132090	A2	19741218	JP 1973-89685	19730811
BE 803539	A1	19740213	BE 1973-134517	19730813
GB 1437023	A	19760526	GB 1973-38246	19730813
PRIORITY APPLN. INFO.:			DE 1972-2239846	19720812
			DE 1973-2334562	19730707

GI For diagram(s), see printed CA Issue.

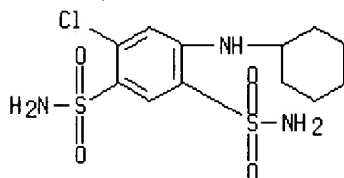
AB Twenty-three sulfonamides I (R = Me, Et, Pr, Bu, or PhCH<sub>2</sub>; R<sub>1</sub>, R<sub>2</sub> = H or Me; R<sub>3</sub> = e.g., H, PhCH<sub>2</sub>, PhCH<sub>2</sub>CH<sub>2</sub>, 2-MeOC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub> piperonyl, or cyclohexyl, R<sub>4</sub> = H or Me; or NR<sub>3</sub>R<sub>4</sub> = 4-methylpiperazinyl, morpholino, or 1-pyrrolidinyl) and(or) their hydrochlorides, useful as antihypertensives (no data), were prepd. either by reaction of II (X = Cl, X<sub>1</sub> = substituted piperazinyl) with R<sub>3</sub>R<sub>4</sub>NH or of II (X = R<sub>3</sub>R<sub>4</sub>N, X<sub>1</sub> = Cl) with the corresponding piperazine. Correction CA 80:121004q.

IT 14558-87-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with methylpiperazine)

RN 14558-87-3 HCAPLUS

CN 1,3-Benzenedisulfonamide, 4-chloro-6-(cyclohexylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 36 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 1974:145809 HCAPLUS  
 DOCUMENT NUMBER: 80:145809  
 TITLE: Anthranilic acid derivatives  
 INVENTOR(S): Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.  
 PATENT ASSIGNEE(S): Merck and Co., Inc.  
 SOURCE: U.S., 12 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3780027	A	19731218	US 1970-33061	19700429
US 3953476	A	19760427	US 1974-465949	19740501
PRIORITY APPLN. INFO.:			US 1970-33061	19700429
			US 1971-212745	19711227

GI For diagram(s), see printed CA Issue.

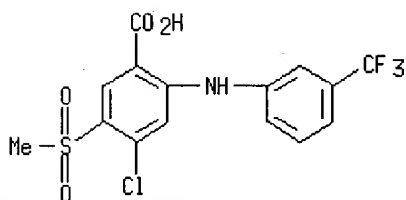
AB Anthranilic acids (I; R = Cl, Me; R1 = Me, Et, Me2CH, CF3, 4-ClC6H4CH2; R2 = furfuryl, Bu, PhCH2, m-, p-F3CC6H4CH2, p-ClC6H4CH2, p-FC6H4CH2, 2-pyridylmethyl, n = 1,2) and aminobenzoic acids (II; R3 = furfuryl, benzyl, butyl; n = 1,2), useful as diuretics, were prepd. Thus, I (R = Cl, R1 = Me, R2 = furfuryl, n = 2) (III) was prepd. from sulfonyl chloride (IV) by treatment with Na2SO3, followed by methylation of the resulting 2,4-dichloro-5-carboxy-benzenesulfinic acid to give 2,4-dichloro-5-methylsulfonylbenzoic acid which when treated with furfurylamine gave III. About twenty-six I and three II were prepd.

IT 51521-83-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 51521-83-6 HCAPLUS

CN Benzoic acid, 4-chloro-5-(methylsulfonyl)-2-[[3-(trifluoromethyl)phenyl]amino]- (9CI) (CA INDEX NAME)

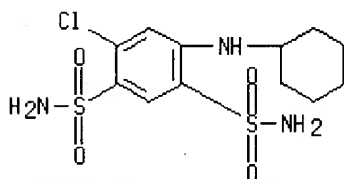


L6 ANSWER 37 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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ACCESSION NUMBER: 1974:121004 HCAPLUS  
 DOCUMENT NUMBER: 80:121004  
 TITLE: Antihypertensive 4,6-diamino-1,3-benzenedisulfonamides  
 INVENTOR(S): Sturm, Karl; Starey, Franz  
 PATENT ASSIGNEE(S): Farbwerke Hoechst A.-G.  
 SOURCE: Ger. Offen., 22 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	DE 223946		19740214	DE 1972-2239846	19720812
AB	Amines are reacted with chlorobenzenedisulfonamides to prepare 4,6-diamino-1,3-benzenedisulfonamides as hypertensives.				
IT	14558-87-3				
	RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with amines)				
RN	14558-87-3 HCAPLUS				
CN	1,3-Benzenedisulfonamide, 4-chloro-6-(cyclohexylamino)- (9CI) (CA INDEX NAME)				



L6 ANSWER 38 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 1973:110917 HCAPLUS  
DOCUMENT NUMBER: 78:110917  
TITLE: 4-Chloro-5-sulfamoylanthranilic acid derivatives  
INVENTOR(S): Schoenberg, Shlomo; Jellin, Haim  
PATENT ASSIGNEE(S): Teva Middle East Pharmaceutical and Chemical Works Ltd.  
SOURCE: Ger. Offen., 32 ppp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2235400	A1	19730201	DE 1972-2235400	19720719
DE 2235400	B2	19770630		
IL 37345	A1	19740314	IL 1971-37345	19710720
IL 38812	A1	19750210	IL 1972-38812	19720222
ZA 7204623	A	19730328	ZA 1972-4623	19720705
AU 7244308	A1	19740221	AU 1972-44308	19720706
CA 1024988	A1	19780124	CA 1972-146492	19720706
SE 384675	B	19760517	SE 1972-9055	19720707
FR 2146249	A1	19730302	FR 1972-25075	19720711
US 3860582	A	19750114	US 1972-271314	19720712
ES 404965	A1	19760401	ES 1972-404965	19720717
DD 99572	Z	19730820	DD 1972-164494	19720718
CS 183664	P	19780731	CS 1972-5097	19720718
BE 786432	A1	19721116	BE 1972-52054	19720719
AT 315827	B	19740610	AT 1972-6231	19720719
SU 455533	D	19741230	SU 1972-1814329	19720719
CH 566972	A	19750930	CH 1972-10788	19720719
NO 133892	B	19760405	NO 1972-2578	19720719
DK 133503	B	19760531	DK 1972-3584	19720719
NL 7210054	A	19730123	NL 1972-10054	19720720
JP 51006660	B4	19760301	JP 1972-73330	19720720

RO 60274 P 19760915 RO 1972-71689 19720720  
 PRIORITY APPLN. INFO.: IL 1971-37345 19710720  
 IL 1972-38812 19720222

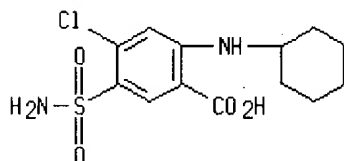
AB Twenty-three title compds., 2,4,5,-RNHCl(R1QCH2NHSO2)c6H2CO2H [I; Q = O, S; R = Bu, cyclohexyl, PhCH2, furfuryl; R1 = C1-7 normal alkyl, CHMe2, CH2CH:CH2, CH2C=CH, CH2CH2OH, CH2CH2OEt, CH2CH(OH)CH2OH, CH2Ph, cyclohexyl, furfuryl], useful as diuretics and saluretics, were prepd. by reaction of 2,4,5-RNHCl(H2NSO2)C6H2CO2H (II) with HCHO and R1QH or via I (Q = O, R1 = Me, Bu) with R1 exchange on heating with excess R1QH. Thus, 16.5 g II (R = furfuryl), 7.5 ml 37% HCHO, and 50 ml BuOH were heated 3 hr at 75-80° to give 15.1 g I (Q = O, R = furfuryl, R1 = Bu) (III). Heating I (Q = O, R = furfuryl, R1 = Me) and 60 ml BuOH 3 hr at 75-80° gave 19 g III. III had LD50 9.8 g/kg orally in rats as compared with 4 mg/kg for common diuretic furosemide.

IT 4793-39-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkoxymethylation of)

RN 4793-39-9 HCAPLUS

CN Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-(cyclohexylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 39 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 1970:35832 HCAPLUS  
 DOCUMENT NUMBER: 72:35832  
 TITLE: Detection of sulfonamido groups  
 AUTHOR(S): Bradshaw, L. R. A.  
 CORPORATE SOURCE: Sch. Med., Leeds, UK  
 SOURCE: Journal of Chromatography (1969), 44(2), 422-4  
 CODEN: JOCRAM; ISSN: 0021-9673  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

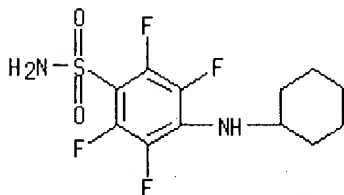
AB All compds. with unsubstituted sulfonamido groups gave a yellow color with DAB reagent [1.5 g p-(dimethylamino)benzaldehyde dissolved in 75 ml EtOH and 25 ml NH4OH, sp. gr. 0.88] on silica gel N, alumina G, or paper. The spots were more stable on paper than on thin layers. Also sulfathiazole and sulfapyridine (sulfonamido group is substituted with a heterocyclic ring) gave a yellow color. DAC reagent [1.5 g p-(dimethylamino)cinnamaldehyde in 75 ml EtOH and 25 ml NH4OH] gave red spots on an orange background with the same compds. Detection limits and Rf values on silica gel N plates with 1:1 PhMe-EtOAc as solvent were: 4-(ethylsulfonyl)benzenesulfonamide 0.5, 0.25; 4-(ethylsulfonyl)naphthalene-I-sulfonamide 0.2, 0.44; 4-(methylsulfonyl)naphthalene-I-sulfonamide 0.2, 0.40; 4-(ethylthio)naphthalene-I-sulfonamide 0.2, 0.59; naphthalene-I-sulfonamide 0.4, 0.57; p-toluenesulfonamide 1.0, 0.55; N4-acetylsulfanilamide 1.0, 0.06; 4-piperonyl-2,3,5,6-tetrafluorobenzenesulfonamide 0.3, 0.77; 4-(cyclohexylamino)-2,3,5,6-tetrafluorobenzenesulfonamide 0.3, 0.75; 1-oxo-3-(3-sulfamoyl-4-chlorophenyl)-3-hydroxyisoindoline[chlorthalidone (Hygroton)] 0.5, 0.15; p-(tetrahydro-2H-1,2-thiazin-2-yl)-benzenesulfonamide dioxide 0.4 µg, 0.23.

IT 4408-99-5

RL: ANT (Analyte); ANST (Analytical study)  
(detection of, color reaction in)

RN 4408-99-5 HCAPLUS

CN Sulfanilamide, N4-cyclohexyl-2,3,5,6-tetrafluoro- (7CI, 8CI) (CA INDEX NAME)



L6 ANSWER 40 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
References

ACCESSION NUMBER: 1969:67909 HCAPLUS  
DOCUMENT NUMBER: 70:67909  
TITLE: Disulfamoylaniline  
INVENTOR(S): Nitta, Yoshihiro; Shindo, Minoru  
PATENT ASSIGNEE(S): Chugai Pharmaceutical Co., Ltd.  
SOURCE: Jpn. Tokkyo Koho, 1 p.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 43016740	B4	19680715	JP	19640806

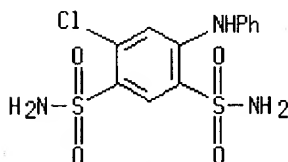
AB Manuf. of 5-chloro-2,4-disulfamoylaniline (I), useful as a diuretic, by the reaction of 5-chloroaniline-2,4-disulfonyl chloride (II) with (NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> or NH<sub>4</sub>HCO<sub>3</sub> in dichloroethane or tetrachloroethane (III) is described. Thus, 10 g. (NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> is added to a mixt. of 10 g. II and 20 ml. III, the mixt. stirred 30 min. and heated 2 hrs., and 100 ml. H<sub>2</sub>O added to give 75% I, m. 253-4°.

IT 21525-49-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 21525-49-5 HCAPLUS

CN m-Benzenedisulfonamide, 4-anilino-6-chloro- (7CI, 8CI) (CA INDEX NAME)



L6 ANSWER 41 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing  
References

ACCESSION NUMBER: 1967:421675 HCAPLUS  
DOCUMENT NUMBER: 67:21675  
TITLE: Preparation of substituted anilines



PATENT ASSIGNEE(S): Merck and Co., Inc.  
 SOURCE: Neth. Appl., 13 pp.  
 CODEN: NAXXAN  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Dutch  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6608180		19661227	NL	19660613
FR 1483222			FR	

GI For diagram(s), see printed CA Issue.

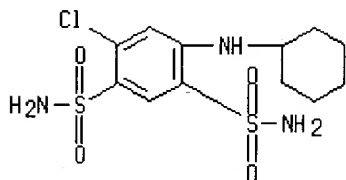
AB N-Substituted derivs. of 2,4-disulfamoylaniline (I) are useful as diuretics. Thus, the N,N-dimethyl-5-chloro deriv. of I was prepd. from 3 g. 1,3-dichloro-4,6-disulfamoylbenzene and 3.5 g. 25% Me<sub>2</sub>NH in 60 ml. EtOH and 5 ml. H<sub>2</sub>O. The mixt. was heated in a sealed tube at 60° for 48 hrs. Then the solvent was removed in vacuo. The solid residue was purified by recrystn. from alc.-H<sub>2</sub>O mixt. The product has the structure II (X = Cl, R = R<sub>1</sub> = Me) and has m.p. 240-1°. Other II prepd. were (X, R, R<sub>1</sub>, and m.p. given): Me, H, NH<sub>2</sub>, 219-20°; Cl, H, (CH<sub>2</sub>)<sub>3</sub>Ph, 183-5°; Cl, H, CH<sub>2</sub>CH<sub>2</sub>OH, 205-7°; Cl, H, CH<sub>2</sub>CH(OH)Me, 184-7°; Me, H, CH<sub>2</sub>CHMePh, 162-4°; Cl, H, CH<sub>2</sub>CH<sub>2</sub>Ph, 219-21°; Cl, H, NH<sub>2</sub>, 245-6°; Cl, H, CHMeCH<sub>2</sub>Ph, 254-5°; Me, H, CH<sub>2</sub>CHMePh, 162-4°; Cl, H, CH<sub>2</sub>CHMePh, 161-4°; Cl, H, p-ClC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>, 236-8°; Cl, H, o-ClC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>, 240-2°; Cl, H, CH<sub>2</sub>Ph, 211-13°; Cl, H, CHMePh, 217-19°; Cl, H, n-C<sub>8</sub>H<sub>17</sub>, 186.5-8.5°; Cl, H, C<sub>6</sub>H<sub>11</sub>, 223-5°; and Cl, H, CH<sub>2</sub>CH<sub>2</sub>C<sub>6</sub>H<sub>11</sub>, 193-5°.

IT 14558-87-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 14558-87-3 HCAPLUS

CN 1,3-Benzenedisulfonamide, 4-chloro-6-(cyclohexylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 42 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text  
 Citing References

ACCESSION NUMBER: 1966:43634 HCAPLUS  
 DOCUMENT NUMBER: 64:43634  
 ORIGINAL REFERENCE NO.: 64:8112e-h, 8113a-h, 8114a-h, 8115a-c  
 TITLE: Chemistry of furosemide. I. Syntheses of 5-sulfamoylanthranilic acid derivatives  
 AUTHOR(S): Sturm, Karl; Siedel, Walter; Weyer, Rudi; Ruschig, Heinrich  
 CORPORATE SOURCE: Farbwerke Hoechst A.-G., Frankfurt/M., Germany  
 SOURCE: Chemische Berichte (1966), 99(1), 328-44  
 CODEN: CHBEAM; ISSN: 0009-2940  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 64:43634

GI For diagram(s), see printed CA Issue.

AB 2,4-Dihalo-5-sulfamoylbenzoic acids and their functional derivs. reacted at higher temp. with primary and secondary amines,  $\text{NH}_3$ , and  $\text{N}_2\text{H}_4$  with the exchange of 1 halogen atom by a basic group. Some of the condensation products, particularly 4-chloro-5-sulfamoyl-N-(2-furylmethyl)anthranilic acid (furosemide) (I), exhibited a high saluretic and diuretic activity. 2,4- $\text{Cl}_2\text{C}_6\text{H}_3\text{CO}_2\text{H}$  (40 g.) added at room temp. with stirring to 120 cc.  $\text{ClSO}_3\text{H}$ , heated rapidly to  $155^\circ$  stirred 2 hrs. at  $155^\circ$ , cooled, and added dropwise to 1 kg. ice, and the moist, yellowish 2,4,5- $\text{Cl}_2(\text{ClO}_2\text{S})\text{C}_6\text{H}_2\text{CO}_2\text{H}$  (II) [dried, m.  $167-75^\circ$ ,  $184^\circ$  ( $\text{CHCl}_3$ -petr. ether)] added in portions with stirring and cooling to 400 cc. concd.  $\text{HCl}$ , kept overnight, and acidified with  $\text{HCl}$  to pH 2 yielded 39 g. III ( $\text{R} = \text{R}' = \text{H}$ ,  $\text{X} = \text{Y} = \text{Cl}$ ) (IV), m.  $233^\circ$  ( $\text{H}_2\text{O}$ ). II with 400 cc. 10% aq.  $\text{MeNH}_2$  gave similarly 34 g. III ( $\text{R} = \text{Me}$ ,  $\text{R}' = \text{H}$ ,  $\text{X} = \text{Y} = \text{Cl}$ ) (V), m.  $200^\circ$  (50%  $\text{EtOH}$ ), and with 400 cc. 15% aq.  $\text{Me}_2\text{NH}$  yielded 39 g. III ( $\text{R} = \text{R}' = \text{Me}$ ,  $\text{X} = \text{Y} = \text{Cl}$ ), m.  $182^\circ$  (aq.  $\text{EtOH}$ ). 2,4- $\text{H}_2\text{NClC}_6\text{H}_3\text{CO}_2\text{Et}$  (100 g.) and 300 cc. 5N  $\text{HCl}$  heated 10 min. on a steam-bath, cooled to  $0^\circ$  treated with 35 g.  $\text{NaNO}_2$ , filtered, and treated 1 hr. at  $0^\circ$  with 200 g. 60%  $\text{HBF}_4$  yielded 116 g.  $[5,2-\text{Cl}(\text{EtO}_2\text{C})\text{C}_6\text{H}_3\text{N}_2]\text{BF}_4$ , decomp.  $147^\circ$ , which fused over a free flame until the  $\text{BF}_3$  evolution ceased gave crude 4,2- $\text{ClFC}_6\text{H}_3\text{CO}_2\text{Et}$ ; this refluxed 1 hr. with 40 g.  $\text{KOH}$  in 200 cc. 50%  $\text{EtOH}$  and acidified with 2N  $\text{HCl}$  yielded 48 g. 4,2- $\text{ClFC}_6\text{H}_3\text{CO}_2\text{H}$  (VI), m.  $203-4^\circ$  (30%  $\text{EtOH}$ ). VI (35 g.) treated successively with  $\text{ClSO}_3\text{H}$  and  $\text{NH}_4\text{OH}$  gave 26g. III ( $\text{R} = \text{R}' = \text{H}$ ,  $\text{X} = \text{Cl}$ ,  $\text{Y} = \text{F}$ ) (VII), m.  $242-3^\circ$  (80%  $\text{EtOH}$ ). 4,2- $\text{H}_2\text{NClC}_6\text{H}_3\text{CO}_2\text{Et}$  (100 g.) was converted via the  $[3,4-\text{Cl}(\text{EtO}_2\text{C})\text{C}_5\text{H}_3\text{N}_2]\text{BF}_4$ , decomp.  $125^\circ$ , and 2,4- $\text{ClFC}_6\text{H}_3\text{CO}_2\text{H}$ , m.  $180-1^\circ$ , to 27 g. (crude) III ( $\text{R} = \text{R}' = \text{H}$ ,  $\text{X} = \text{F}$ ,  $\text{Y} = \text{Cl}$ ) (VIII), m.  $246^\circ$  ( $\text{H}_2\text{O}$ ). IV (27 g.) refluxed 1 hr. with 35 cc.  $\text{SOCl}_2$  and evapd., and the residue dissolved in 100 cc.  $\text{MeOH}$ , basified dropwise with cooling with  $\text{Et}_3\text{N}$ , and warmed to room temp. yielded 21.6 g. Me ester of IV, m.  $202^\circ$  (80%  $\text{EtOH}$ ). Similarly was prepd. the Et ester of IV, 77%, m.  $116^\circ$  ( $\text{EtOH}$ ). IV (27 g.) treated with  $\text{SOCl}_2$ , and the crude acid chloride stirred into 200 cc. concd.  $\text{NH}_4\text{OH}$ , concd. to half-vol., and adjusted to pH 4.0 gave 16 g. amide (IX) of IV, m.  $208-10^\circ$  (80%  $\text{EtOH}$ ). The acid chloride from a similar run treated with 100 cc. 40% aq.  $\text{EtNH}_2$  gave 21 g. ethylamide (X) of IV, m.  $214^\circ$  ( $\text{EtOH}$ ). A similar run with 40 cc.  $\text{BuNH}_2$  in 100 cc. 80% tetrahydrofuran (THF) gave 23 g. butylamide (XI) of IV, m.  $180^\circ$  (90%  $\text{EtOH}$ ). VIII (25.3 g.) in 250 cc.  $\text{MeOH}$  treated with 1.05 equiv.  $\text{CH}_2\text{N}_2\text{Et}_2\text{O}$  and kept briefly at room temp. yielded 23.5 g. Me ester of VIII, m.  $163-4^\circ$ . 2,4- $\text{Br}_2\text{C}_6\text{H}_3\text{CO}_2\text{H}$  (56 g.) treated successively with  $\text{ClSO}_3\text{H}$  and  $\text{NH}_4\text{OH}$  yielded 36 g. III ( $\text{R} = \text{R}' = \text{H}$ ,  $\text{X} = \text{Y} = \text{Br}$ ) (XII), m.  $243^\circ$  (aq.  $\text{HCONMe}_2$ ). The appropriate III heated with 3-10 equivs. amine with or without solvent heated to a predetd. temp. (runs at temps. above the b.p. of the solvent were performed in an autoclave under N), and the mixt. poured into dil.  $\text{HCl}$  gave the corresponding XIII. VI (25.3 g.) in 50 g. furfurylamine (XIV) heated 2 hrs. at  $95^\circ$ , dild. with 500 cc.  $\text{H}_2\text{O}$ , and acidified at  $0^\circ$  with  $\text{AcOH}$  gave 28 g. I, decomp.  $208^\circ$  (aq.  $\text{EtOH}$ ). IV (50 g.) and 100 g. XIV heated 4 hrs. at  $130^\circ$  and stirred into 1 l. cold 10%  $\text{AcOH}$  gave 26 g. I, decomp.  $205^\circ$  (above  $245^\circ$  with blackening). I (1.0 g.) in 10 cc. N  $\text{NaOH}$  heated 1 hr. on the steam bath and acidified with  $\text{AcOH}$  was recovered unchanged. I (3.3 g.) and 50 cc. N  $\text{HCl}$  refluxed 1 hr. gave 0.4 g. III ( $\text{R} = \text{R}' = \text{H}$ ,  $\text{X} = \text{Cl}$ ,  $\text{Y} = \text{NH}_2$ ), decomp.  $265^\circ$  (aq.  $\text{EtOH}$ ). I (66.2 g.) in 600 cc. THF treated with 41.2 g. dicyclohexylcarbodiimide and kept 1 day at room temp. in the dark, and the crude product extd. with 800 cc. boiling  $\text{EtOH}$  left cryst. anhydride of I and gave 11 g. N-[4-chloro-5-sulfamoyl-2-(2-furylmethylamino)benzoyl]-N,N'-dicyclohexylurea (XV), m.  $163-5^\circ$ . The insol. anhydride dissolved in 200 cc. warm  $\text{HCONMe}_2$ , filtered, dild. with 200 cc.  $\text{H}_2\text{O}$  in portions, and

kept 3 hrs. at room temp. gave 38 g. pure, pale yellow anhydride (XVI) of I, decomp. 183-5°. XVI (7.0 g.) in 70 cc. 2N NaOH kept 2 hrs. at room temp. and adjusted with 2N HCl to pH 2 yielded 4.8 g. cryst. solid, presumably XVII, decomp. above 210° with blackening. XVI (1 g.) and 10 cc. 20% NH<sub>4</sub>OH stirred 15 min. at 80° gave the amide (XVIII) of I, m. 217° (aq. HCONMe<sub>2</sub>); the aq. filtrate acidified yielded I. Me ester (XIX) (6.9 g.) of I in 50 cc. dioxane heated at 90° with 3.0 g. LiAlH<sub>4</sub> gave 2.8 g. pale yellow 4-chloro-5-sulfamoyl-2-(2-furylmethylamino)benzyl alc., m. 157° (H<sub>2</sub>O). I (25 g.), 25 cc. Ac<sub>2</sub>O, and 100 cc. C<sub>5</sub>H<sub>5</sub>N heated 1 hr. on the steam bath, dild. with 500 cc. H<sub>2</sub>O, and acidified with 3N HCl to pH 3.0 gave 24.2 g. diacetyl deriv. of I, decomp. 205-6° (EtOH). I (16.5 g.) and 7.6 cc. Et<sub>3</sub>N in 100 cc. dry THF treated at -5° with stirring with 5.2 cc. ClCO<sub>2</sub>Et, stirred 5 min. at 0°, and poured into 100 cc. cold, concd. NH<sub>4</sub>OH yielded 2.4 g. XVIII, decomp. 223° (aq. HCONMe<sub>2</sub>). XVIII (4.0 g.) in 40 cc. N NaOH refluxed 1 hr., dild. with H<sub>2</sub>O, and adjusted with AcOH to pH 8.0 gave 1.9 g. I, decomp. 204-5°. XI (9.8 g.) and 20 cc. XIV heated 3 hrs. on the steam bath gave 8.5 g. butylamide of I, m. 180-1° (EtOH). XVI (6.5 g.) in 30 cc. THF treated 0.5 hr. at room temp. with 30 cc. PhCH<sub>2</sub>NH<sub>2</sub> gave 3.9 g. benzylamide of I, m. 195-7° with yellowing (EtOH). Similarly was prepd. 1.3 g. N,N-pentamethylenehydrazide of I, m. 196-7° (70% EtOH), from 3.0 g. N,N-pentamethylenehydrazine. H<sub>2</sub>NCH<sub>2</sub>CO<sub>2</sub>Et (3.0 g.) with XVI gave 2.2 g. N-carbethoxymethylamide of I, m. 176° (EtOH), which treated 1 hr. at 25° with 15 cc. N NaOH and adjusted with N HCl to pH 3 yielded 1.7 g. N-carboxymethylamide of I, decomp. 203°. I (33 g.) in 100 cc. THF treated 5 min. with about 200 cc. CH<sub>2</sub>N<sub>2</sub>-Et<sub>2</sub>O yielded 25 g. XIX, m. 184-6°. IV (8.9 g.) in 25 cc. XIV heated 1 hr. at 90° and treated with 200 cc. 10% AcOH yielded 10.6 g. (crude) Et ester (XX) of I, m. 165-7° (EtOH). XX (0.1 g.) in 2 cc. 2N NaOH heated 10 min. at 70° and treated with AcOH gave I. IV (8.9 g.) and 25 cc. XIV heated 2 hrs. at 115° and poured into dil. AcOH, and the ppt. (4.6 g.), m. 134-6° warmed briefly with 30 cc. 2N NaOH at 60-70° and adjusted with AcOH to pH 5 yielded 2.5 g. 4-(2-furylmethylamino)-5-sulfamoyl-N-(2-furylmethyl)-anthranilic acid, decomp. 217° (EtOH). XVIII (3.3 g.), 40 cc. EtOH, 2.0 cc. N NaOH, and 1.2 g. 30% aq. CH<sub>2</sub>O refluxed 0.5 hr. gave 2.3 g. 7-chloro-6-sulfamoyl-1-(2-furylmethyl)-4-oxo-1,2,3,4-tetrahydroquinazoline, decomp. 245° (aq. HCONMe<sub>2</sub>). XII (18 g.) and 36 g. XIV heated 2 hrs. at 125° gave 3.4 g. XIII (R = R' = R'' = H, R''' = 2-furylmethyl, X = Br), decomp. 216° (EtOH). VII (8.9 g.) and 20 cc. PhCH<sub>2</sub>NH<sub>2</sub> heated 1.5 hrs. on a steam bath and poured into 250 cc. 10% AcOH, and the ppt. repptd. from 250 cc. N NaHCO<sub>3</sub> with 2N HCl yielded 11.8 g. XIII (R = R' = R'' = H, R''' = PhCH<sub>2</sub>, X = Cl) (XXI), decomp. 244° (EtOH). IV (27 g.) and 42 cc. PhCH<sub>2</sub>NH<sub>2</sub> in MeOCH<sub>2</sub>CH<sub>2</sub>OH refluxed 3 hrs. yielded 16 g. XXI, decomp. 244-5° (EtOH). Similarly were prepd. the XIII (X = Cl) listed in the 1st table. XII (36 g.) and PhCH<sub>2</sub>NH<sub>2</sub> gave similarly during 3 hrs. 19 g. XIII (R = R' = R'' = H, R''' = PhCH<sub>2</sub>, X = Br), decomp. 247° (50% EtOH). R, R', R'', R''', m.p., % yield, reflux time (hrs.); H, Me, H, PhCH<sub>2</sub>, 238°, 70, 3; Me, Me, H, PhCH<sub>2</sub>, 206°, 27, 3; H, H, H, o-MeOC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>, 220°, 27, 4; H, H, H, p-MeC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>, 230-1°, 35, 4; H, H, Me, PhCH<sub>2</sub>, 202° (decompn.), 42, 2; H, H, H, 2-thenylmethyl, 201° (decompn.), 87, 3; H, H, H, iso-Bu, 236°, 46, 3; H, H, H, MeO(CH<sub>2</sub>)<sub>3</sub>, 204°, 35, 3; XXI (68.2 g.) with dicyclohexylcarbodiimide yielded 41 g. pale yellow anhydride of XXI, decomp. 207° (repptd. from HCONMe<sub>2</sub> with H<sub>2</sub>O). XXI (34.1 g.) in 100 cc. dioxane treated dropwise with stirring at 80° with 20.0 cc. SOCl<sub>2</sub>, stirred 15 min. at 80°, and dild. with 300 cc. petr. ether, and the resulting acid chloride added in portions with stirring and cooling to 150 cc. THF and 200 cc. concd. NH<sub>4</sub>OH yielded 23.0 g. amide of

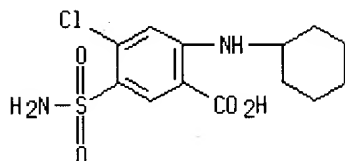
XXI, m. 224° (HCONMe<sub>2</sub>-H<sub>2</sub>O). X (18.0 g.) in 40 cc. PhCH<sub>2</sub>NH<sub>2</sub> heated 2 hrs. at 110° and poured into 200 cc. 2N HCl yielded the ethylamide of XXI, m. 251-2° (HCONMe<sub>2</sub>-H<sub>2</sub>O). XXI (3.4 g.) condensed with CH<sub>2</sub>O gave 3.0 g. 7-chloro-6-sulfamoyl-1-benzyl-4-oxo-1,2,3,4-tetrahydroquinazoline (XXII), m. 244-5° (decompn.) (HCONMe<sub>2</sub>-H<sub>2</sub>O). XIII (3.0 g.) in 60 cc. HCONMe<sub>2</sub> hydrogenated under ambient conditions 10 min. over Pd black gave 1.9 g. 7-chloro-6-sulfamoyl-1,2,3,4-tetrahydroquinazoline, m. 256-8° (decompn.). XXI (10 g.) in 200 cc. MeOH satd. a room temp. with dry HCl and kept overnight gave 5.2 g. Me ester of XXI, m. 188° (aq. HCONMe<sub>2</sub>). Me ester (26.7 g.) of VI and 100 g. (PhCH<sub>2</sub>)<sub>2</sub>NH heated 3 hrs. on a steam bath and stirred into 1 l. N AcOH, and the ppt. heated 15 min. at 100° with 500 cc. 0.5N NaOH gave 36.6 g. XIII (R = R' = H, R'' = R''' = PhCH<sub>2</sub>, X = Cl), decomp. 206°. IV (5.4 g.) and 8 g. MePhCHNH<sub>2</sub> in (CH<sub>2</sub>OH)<sub>2</sub> heated 3 hrs. at 150° yielded 0.5 g. XIII (R = R' = R'' = H, R''' = MePhCH, X = Cl), m. 191-3° (aq. EtOH). IV (10.8 g.) and 25 cc. PhCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> in (MeOCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>O refluxed 2 hrs. and acidified with HCl gave 12.2 g. XIII (R = R' = R'' = H, R''' = PhCH<sub>2</sub>CH<sub>2</sub>, X = Cl), decomp. 215° (50% EtOH); method A. IV (10 g.) and 30 cc. PhNH<sub>2</sub> refluxed 12 hrs. and acidified with 200 cc. 2N HCl gave 5.7 g. XIII (R = R' = R'' = H, R''' = Ph, X = Cl), decomp. 245° (40% MeOH); method B. IV (27 g.) and 200 cc. 10% aq. MeNH<sub>2</sub> heated 5 hrs. at 125-30° yielded 14 g. XIII (R = R' = R'' = H, R''' = Me, X = Cl), m. 264° (decompn.) (35% EtOH); method C. IV (10.8 g.) and 16 cc. piperidine in BuOCH<sub>2</sub>CH<sub>2</sub>OH refluxed 3 hrs. gave 10.4 g. (crude) 4-chloro-5-sulfamoyl-N,N-pentamethylenanthranilic acid, decomp. 224° (50% MeOH); method D. Similarly were prepd. the XIII listed in the 2nd table. VI (5.1 g.) and 6.3 g. 1-ClO<sub>4</sub>H<sub>7</sub>CH<sub>2</sub>NH<sub>2</sub> in 15 cc. C<sub>5</sub>H<sub>5</sub>N refluxed 2 hrs., dild. with H<sub>2</sub>O, and acidified with HCl to pH 3 gave 6.3 g. XIII (R = R' = R'' = H, R''' = 1-ClO<sub>4</sub>H<sub>7</sub>CH<sub>2</sub>, X = Cl), decomp. 222-3° (90% EtOH). Amide (XXV) (5.8 g.) of XXIII, m. 232-3° (aq. HCONMe<sub>2</sub>) in 300 cc. AcOH treated dropwise at 50° with 1.02 cc. Br in 30 cc. AcOH and dild. with 600 cc. H<sub>2</sub>O yielded 5.3 g. dibromide of XXV, decomp. 193° (80% EtOH). XXIV (20 g.) in 60 cc. 5N NaOH heated 2 hrs. on the steam bath and adjusted with dil. HCl to pH 7 gave 12.7 g. XIII (R = R' = R'' = H, R''' = CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, X = Cl), decomp. 269°. IV (10.8 g.) and 7.5 g. 80% N<sub>2</sub>H<sub>4</sub> refluxed 2 hrs. in 20 cc. MeOCH<sub>2</sub>CH<sub>2</sub>OH and poured into 200 cc. H<sub>2</sub>O gave 6.2 g. pale yellow XIII (R = R' = R'' = H, R''' = NH<sub>2</sub>, X = Cl) (XXVI), decomp. 290° (aq. HCONMe<sub>2</sub>). XXVI (1.5 g.) recrystd. from boiling N HCl and then H<sub>2</sub>O gave 1.0 g. 6-chloro-3-oxo-5-sulfamoylindazoline, decomp. 290°. VIII (8.9 g.) in 20 cc. PhCH<sub>2</sub>NH<sub>2</sub> heated 3 hrs. on a steam bath gave 11.5 g. 2,4,5-Cl(PhCH<sub>2</sub>NH)(H<sub>2</sub>NO<sub>2</sub>S)C<sub>6</sub>H<sub>2</sub>CO<sub>2</sub>H (XXVII), decomp. 232° (EtOH). IX (16.-2 g.) and 16.2 g. PhCH<sub>2</sub>NH<sub>2</sub> in 60 cc. MeOCH<sub>2</sub>CH<sub>2</sub>OH refluxed 3 hrs. and poured into 300 cc. 5% AcOH, and the pptd. isomer mixt. (18.8 g.), m. 195-205% extd. twice with 250 cc. 90% boiling EtOH gave 1.6 g. amide (XXVIII) of XXVII, m. 260-2° (aq. HCONMe<sub>2</sub>). XXVIII (3.4 g.), 1.0 cc. 30% aq. CH<sub>2</sub>O, 20 cc. EtOH, 20 cc. (MeOCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>O, and 10 cc. 0.2N NaOH heated 1 hr. on a steam bath yielded 2.7 g. 6-chloro-7-carbamoyl-4-benzyl-2,3-dihydro-4H-1,2,4-benzothiadiazine 1,1-dioxide, m. 244° (aq. HCONMe<sub>2</sub>). R, R', R'', R''', X, m.p., % yield (method), reaction time (hrs.); , H, H, H, Me, Cl, 242-4° (decompn.), 66, (C), 2; H, H, H, cyclohexylmethyl, Cl, 213°, -- (A), 3; H, H, H, 2-tetrahydrofurylmethyl, Cl, 228° (decompn.), -- (A), 3; H, H, H, cyclohexyl, Cl, 248-9° (decompn.), 40 (A), 3; H, H, H, C<sub>8</sub>H<sub>17</sub>, Cl 211°, 43 (A), 3; H, H, H, CH<sub>2</sub>:CHCH<sub>2</sub> (XXIII), Cl, 218° (decompn.), 71 (C), 2; H, H, Et, Et, Cl, 214°, 50 (C), 5; H, H, H, EtSCH<sub>2</sub>CH<sub>2</sub>, Cl, 192-3°, 42 (A), 3; H, H, H, CH<sub>2</sub>CH<sub>2</sub>OH, Cl, 246° (decompn.), 48 (B), 2; H, H, H, CH<sub>2</sub>CH<sub>2</sub>NHAc (XXIV), Cl, 249° (decompn.), 57 (D), 3; H, H, H, H, Cl, 270-2° (decompn.), 83 (C), 3; VIII (4.0 g.) in 12 cc. XIV heated 2 hrs. on a

steam bath, poured into 120 cc. 5% AcOH, and adjusted with HCl to pH 3 gave 3.45 g. III (R = R' = H, X = 2-furylmethylamino, Y = Cl) (XIX), decomp. 201-2° with blackening (50% EtOH). XXIX (10 g.) in 50 cc. anhyd. HCO<sub>2</sub>H refluxed 2 hrs. gave 6.9 g. XXX, decomp. 336-8°. XXX (10 g.) in 120 cc. N NaHCO<sub>3</sub> treated at room temp. with 4.0 g. NaBH<sub>4</sub> and kept 1 hr. at room temp. gave 6.9 g. 2,3-dihydro deriv. of XXX, decomp. 235-7°. XXX (5.2 g.) in 100 cc. 2N NaOH heated 2 hrs. on the steam bath with 100 cc. 2N NaOH, cooled, and adjusted with 5N HCl to pH 2 yielded 3.5 g. III (R = R' = H, X = NH<sub>2</sub>, Y = Cl), decomp. 232-3°, which with CH<sub>2</sub>N<sub>2</sub>-THF gave the Me ester, m. 225°. VIII converted to the amide, m. 221°, and then heated 2 hrs. on the steam bath with 4 parts XIV gave the amide of XXIX, m. 226-7° (aq. EtOH). XXIX with CH<sub>2</sub>N<sub>2</sub>-THF gave the Me ester of XXIX, m. 137° (AcOEt-petr. ether). XXIX (3.3 g.) in 50 cc. EtOH heated 1 hr. on a steam bath with 1.5 cc. aq. CH<sub>2</sub>O and 2 cc. N NaOH and treated with 150 cc. 1% AcOH yielded 2.9 g. 4-furylmethyl-2,3-dihydro-4H- analog of XXX, decomp. 223-4° with blackening and gas evolution. VIII (4.0 g.) in 12.0 cc. 2-tetrahydrofurylmethylamine stirred 1 hr. at 110° and poured into 80 cc. 2N HCl gave 2.7 g. XIII (R = R' = R'' = H, R''' = 2-tetrahydrofurylmethyl, X = Cl), m. 217-18° (75% EtOH).

IT 4793-39-9, Anthranilic acid, 4-chloro-N-cyclohexyl-5-sulfamoyl- (prepn. of)

RN 4793-39-9 HCAPLUS

CN Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-(cyclohexylamino)- (9CI) (CA INDEX NAME)



L6 ANSWER 43 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 1966:3908 HCAPLUS  
 DOCUMENT NUMBER: 64:3908  
 ORIGINAL REFERENCE NO.: 64:651e-h  
 TITLE: 4-Amino-2,3,5-tetrafluorobenzenesulfonamides  
 PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
 SOURCE: 31 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 659230		19650803	BE	
GB 1031082			GB	
NL 6501375			NL	

PRIORITY APPLN. INFO.: GB 19640204

GI For diagram(s), see printed CA Issue.

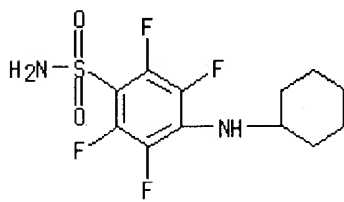
AB Compds. of the general formula I are prepd. and can be used as anticonvulsive agents. Thus, a mixt. of 8 parts piperidine, 10 parts pentafluorobenzenesulfonamide, and 100 parts ether is agitated 10 min. at room temp., cooled to 0-5°, filtered, and the filtrate is evapd. to give 4-piperi-dino-2,3,5,6-tetrafluorobenzenesulfonamide, m. 184-9°

(aq. EtOH). Similarly prepd. are the following I (X, R, and m.p. given):  
 MeNH, H, 154-5° (H<sub>2</sub>O); Me<sub>2</sub>NH, H, 194-5° (EtOH); iso-PrNH, H, 165-6° (aq. EtOH); cyclopentylamino, H, 178-9° (aq. EtOH); cyclohexylamino, H, 136-8° (aq. EtOH); 1-pyrrolidinyl, H, 190-1° (aq. EtOH); morpholino, H, 226-7° (EtOH); 4-methylpiperazino, H, 198-200° (aq. EtOH); NH<sub>2</sub>, Me, 175-6° (aq. EtOH); NH<sub>2</sub>, Et, 158-60°; NH<sub>2</sub>, iso-Pr, 144-5° (C<sub>6</sub>H<sub>6</sub>); cyclohexylamino, Me, 104-6° (aq. EtOH); cyclohexylamino, Et, 128-30° (aq. EtOH); cyclohexylamino, iso-Pr, 122-4° (C<sub>6</sub>H<sub>6</sub>-petroleum ether); piperidino, Me, 136-8° (C<sub>6</sub>H<sub>6</sub>-petroleum ether); piperidino, Et, 91-3° (aq. EtOH); piperidino, iso-Pr, 94-6° (aq. EtOH); HOCH<sub>2</sub>CH<sub>2</sub>NH, H, 143-5° (H<sub>2</sub>O); BuNH, H, 105-6° (aq. EtOH); cyclohexylamino, H, -- [Na salt m. 246-8° (decompn.)]; piperidino, H, -- [Na salt m. 286-8° (decompn.)]; hexamethylenimino, H, 138-9° (C<sub>6</sub>H<sub>6</sub>-petroleum ether); MeNH, Me, 180-1° (aq. EtOH); iso-PrNH, iso-Pr, 116-17° (aq. EtOH).

IT 4408-99-5, Sulfanilamide, N4-cyclohexyl-2,3,5,6-tetrafluoro-  
 (prepn. of)

RN 4408-99-5 HCAPLUS

CN Sulfanilamide, N4-cyclohexyl-2,3,5,6-tetrafluoro- (7CI; 8CI) (CA INDEX NAME)



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Full Citing  
Text References

ACCESSION NUMBER: 1964:404109 HCAPLUS  
 DOCUMENT NUMBER: 61:4109  
 ORIGINAL REFERENCE NO.: 61:617d-g  
 TITLE: 5-Dimethylsulfamoyl-2-anilinobenzoic acids  
 PATENT ASSIGNEE(S): CIBA Ltd.  
 SOURCE: 44 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 629369		19631021	BE	
FR 1353208			FR	
FR M2598			FR	
GB 997176			GB	
PRIORITY APPLN. INFO.:	CH		19620309	
	CH		19620530	

GI For diagram(s), see printed CA Issue.

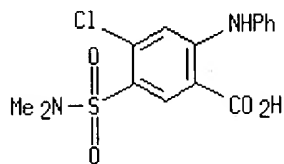
AB Compds., most of them of type I and II, have antiphlogistic, antipyretic, analgesic, and antiallergic properties. There were prepd. by various methods: To a soln. of 120 g. Me<sub>2</sub>NH in 1 l. H<sub>2</sub>O was slowly added at room temp. 140 g. 2,4-dichloro-5-chlorosulfonylbenzoic acid to give 2,4-dichloro-5-dimethylsulfamoylbenzoic acid (III), m. 180-3° (EtOH). A mixt. of 20 g. III, 11.6 g. K<sub>2</sub>CO<sub>3</sub>, and 0.5 g. CuO was heated

for 2 hrs. in an oil bath at 190-200° to yield 2-anilino-4-chloro-5-dimethylsulfamoylbenzoic acid, m. 210-14°. Similarly prepd. were 2-anilino-3-methyl-5-dimethylsulfamoylbenzoic acid, m. 220-3°, 2-anilino-5-morpholinosulfonylbenzoic acid, m. 221-2°, and the following I (R, R1, and m.p. given): H, H (IV), 200-1° [Me ester m. 118-19°; amide m. 215-17°; acid chloride (V) m. 154-5°]; 2-Me, 3-Me, 194-5°; H, 4-Cl, 199-202°; H, 3-Cl, 184-6°; 2-MeO, 5-MeO, 196-7°; 2-MeO, 4-MeO, 184-6°; H, 4-MeO, 172-4°; H, 3-CF<sub>3</sub>, 203-4°. A soln. of 8 g. V, 4.8 g. N-methylpiperazine, and 150 cc. C<sub>6</sub>H<sub>6</sub> was refluxed 3 hrs. to give II (R = N-methylpiperazino), m. 154-5° (EtOH). To 30 cc. boiling EtOH was added 10 g. IV and then 30 cc. 40% HCHO to give 1-phenyl-6-dimethylsulfamoyl-2H-3,1-benzoxazin-4-one (VI), m. 148-50°. A soln. of 10 g. VI, 15 g. Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, and 100 cc. EtOH was refluxed 5 hrs. to yield II (R = Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH), m. 88-90° (ligroine). Also prepd. were II (R and m.p. given): EtNH, 160-1°; Me(CH<sub>2</sub>)<sub>5</sub>NH, 126-7°.

IT 92551-66-1, Anthranilic acid, 4-chloro-5-(dimethylsulfamoyl)-N-phenyl-  
(prepn. of)

RN 92551-66-1 HCAPLUS

CN Anthranilic acid, 4-chloro-5-(dimethylsulfamoyl)-N-phenyl- (7CI) (CA INDEX NAME)



L6 ANSWER 45 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

ACCESSION NUMBER: 1962:429671 HCAPLUS  
DOCUMENT NUMBER: 57:29671  
ORIGINAL REFERENCE NO.: 57:5928d-i, 5929a-g  
TITLE: Diuretics. VI. 1,2,4-Benzothiadiazine 1,1-dioxides substituted at 2,3,4- and 7-N-sulfamoyl positions  
AUTHOR(S): Whitehead, Calvert W.; Traverso, John J.  
CORPORATE SOURCE: Lilly Res. Labs., Indianapolis, IN  
SOURCE: Journal of Organic Chemistry (1962), 27, 951-6  
CODEN: JOCEAH; ISSN: 0022-3263  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
GI For diagram(s), see printed CA Issue.  
AB cf. CA 55, 27357f. Fluorobenzenes were chlorosulfonated to 2,4-bis(chlorosulfonyl)fluorobenzenes and converted in turn to 2,4-disulfamoylanilines (I) and 4-substituted 1,2,4-benzothiadiazine 1,1-dioxides (II) and their 3,4-dihydro analogs (III) ClSO<sub>3</sub>H (1 kg.) stirred with dropwise addn. of 100 g. 1,3-ClC<sub>6</sub>H<sub>4</sub>F and the mixt. heated gradually with addn. of 400 g. NaCl at 120°, the mixt. heated to 160° and the temp. maintained 4 hrs. (HCl adsorbed on H<sub>2</sub>O flowing over porcelain chips), the thick mixt. added to crushed ice and the H<sub>2</sub>O-washed product taken up in Et<sub>2</sub>O, the H<sub>2</sub>O-washed and dried Et<sub>2</sub>O evapd. yielded 130 g. 5,2,4-Cl(SO<sub>2</sub>Cl)<sub>2</sub>C<sub>6</sub>H<sub>2</sub>F (IV), m. 105-7° (Et<sub>2</sub>O-petr. ether). Similar conversion of 1,3-FC<sub>6</sub>H<sub>4</sub>Me yielded 56% 5,2,4-Me(SO<sub>2</sub>Cl)<sub>2</sub>C<sub>6</sub>H<sub>2</sub>F (V), m. 97°. IV (100 g.) added portionwise to a large excess of liquid NH<sub>3</sub> and the product on evapn. of NH<sub>3</sub> yielded

90% 5,2,4-Cl(H<sub>2</sub>NSO<sub>2</sub>)<sub>2</sub>C<sub>6</sub>H<sub>2</sub>F (VI), m. 223-4°. Similarly was prepd. from V in 90% yield 5,2,4-Me(H<sub>2</sub>NSO<sub>2</sub>)<sub>2</sub>C<sub>6</sub>H<sub>2</sub>F (VII), m. 210°. VI (VII) (0.1 mole), 0.15 mole NEt<sub>3</sub>, and 0.1 mole appropriate primary amine, RNH<sub>2</sub>, heated 1-2 hrs. on a steam bath in dil. alc. and the concd. soln. dild. with H<sub>2</sub>O, neutralized with dil. HCl, and the products recrystd. from dil. alc. gave the tabulated I (R, X, % yield, and m.p. given): Me, Cl, 70, 249°; Et, Cl, 70, 165°; (CH<sub>2</sub>)<sub>2</sub>OMe, Cl, 51, 165°; Pr, Cl, 50, 188°; Ph, Cl, 40, 230-40°; C<sub>6</sub>H<sub>11</sub>, Cl, 64, 214°; PhCH<sub>2</sub>, Cl, 50, 200°; Me, Me, 31, 243°; Et, Me, 20, 170°; (CH<sub>2</sub>)<sub>2</sub>OH, Me, 51, 205°; (CH<sub>2</sub>)<sub>2</sub>OMe, Me, 35, 147°; Ph, Me, 73, 178°; C<sub>6</sub>H<sub>11</sub>, Me, 55, 208°; PhCH<sub>2</sub>, Me, 30, 198°; (CH<sub>2</sub>)<sub>2</sub>OPh, Me, 70, 192°. I (10 g.) refluxed 4 hrs. in 50-75 ml. HCO<sub>2</sub>H and the hot concd. soln. dild. with H<sub>2</sub>O, the product washed free from acid with H<sub>2</sub>O and recrystd. from dil. alc. or alc.-H<sub>2</sub>O-HCONMe<sub>2</sub> gave the listed II (R, X, % yield, and m.p. given): Me, Cl, 65, 280°; Et, Cl, 75, 260°; Pr, Cl, 57, 252°; MeO(CH<sub>2</sub>)<sub>2</sub>, Cl, 78, 280°; Ph, Cl, 57, 244°; C<sub>6</sub>H<sub>11</sub>, Cl, 60, 250°; PhCH<sub>2</sub>, Cl, 54, 272°; Me, Me, 50, 310°; (CH<sub>2</sub>)<sub>2</sub>OH, Me, 60, 264°; HO<sub>2</sub>C(CH<sub>2</sub>)<sub>2</sub>, Me, 58, 272°; Ph, Me, 40, 195°; C<sub>6</sub>H<sub>11</sub>, Me, 50, 261°; PhCH<sub>3</sub>, Me, 51, 250°; PhO(CH<sub>2</sub>)<sub>2</sub>, Me, 55, 262°; Ph(CH<sub>2</sub>)<sub>2</sub>, Me, 73, 222°. II (5 g.) in hot alc. hydrogenated at 80°/1000 lb./sq. in. over PtO<sub>2</sub>, the filtered soln. concd. and the product recrystd. from dil. alc. yielded III (R, X, % yield, m.p. given): Me, Cl, 60, 245°; Et, Cl, 70, 205°; MeO(CH<sub>2</sub>)<sub>2</sub>, Cl, 50, 232°; C<sub>6</sub>H<sub>11</sub>, Cl, 70, 215°; Me, Me, 92, 245°; PhCH<sub>2</sub>, Cl, 70, 192°; Ph(CH<sub>2</sub>)<sub>2</sub>, Me, 81, 198°; PhO(CH<sub>2</sub>)<sub>2</sub>, Me, 80, 200°. The appropriate aldehyde (0.01 mole) and 0.01 mole 5-chloro-2-(N-methylsulfamoyl)-4-sulfamoylaniline (Close, et al., CA 54, 12150b) in 40 ml. warm 1:1 alc.-6N HCl kept at 20° and the product washed several times with H<sub>2</sub>O, dried, and recrystd. from dil. alc. gave 6-chloro-3,4-dihydro-2,3-disubstituted-7-sulfamoyl-1,2,4-benzothiadiazine 1,1-dioxides (VIII). HCONMe (150 ml.) contg. 0.4 mole 6-chloro-3,4-dihydro-3-oxo-7-sulfamoyl-1,2,4-benzothiadiazine 1,1-dioxide treated with 0.4 mole Nail and the mixt. heated 1 hr. at 70° with 0.4 mole PhCH<sub>2</sub>Cl, the cooled mixt. poured into 4 l. H<sub>2</sub>O and the product recrystd. from H<sub>2</sub>O yielded 25% 2-benzyl-6-chloro-3,4-dihydro-3-oxo-7-sulfamoyl-1,2,4-benzothiadiazine 1,1-dioxide (IX), m. 243, also obtained in 84% yield by using PhCH<sub>2</sub>Br 12 hrs. at 70°. IX (18 g.) refluxed 8 hrs. in 200 ml. 20% NaOH and the cooled filtered soln. acidified with concd. HCl yielded 64% 2-(N-benzylsulfamoyl)-5-chloro-4-sulfamoyl-aniline (X), m. 155° (dil. alc.). X (2 g.) in 250 ml. hot H<sub>2</sub>O stirred with dropwise addn. of 1.5 g. 37% formalin and the soln. refluxed 1.5 hrs., cooled and the product crystd. from dil. alc. and from alc. gave VIII. X (2 g.) and an equimolar amt. of the appropriate aldehyde in 20 ml. 1:1 alc.-6N HCl kept 2-3 hrs. at 20° and the mixt. dild. with H<sub>2</sub>O, the residue on filtration washed with H<sub>2</sub>O and recrystd. from dil. alc. gave 6-chloro-3,4-dihydro-7-sulfamoyl-1,2,4-benzothiadiazine 1,1-dioxides VIII (R, R', % yield, and m.p. given): furfuryl, Me, 70, 240°; cyclopentylmethyl, Me, 75, 235°; 6-methyl-3-cyclohexenyl, Me, 71, 234°; 5-norbornen-2-yl, Me, 50, 260°; 3-methylcyclopentylmethyl, Me, 80, 235°; cyclohexylmethyl, Me, 68, 282°; 3-methyl-5-norbornen-2-yl, Me, 50, 246°; cycloheptylmethyl, Me, 75, 275°; H, PhCH<sub>2</sub>, 50, 226°; Ph, PhCH<sub>2</sub>, 78, 233°; cyclopentylmethyl, PhCH<sub>2</sub>, 75, 210°. PhCH<sub>2</sub>NH<sub>2</sub> (0.2 mole) and 0.02 mole NEt<sub>3</sub> in 200 ml. dioxane treated with 26 g. 5-chloro-2,4-bis(chlorosulfonyl)aniline in 150 ml. dioxane, the mixt. dild. with H<sub>2</sub>O, concd. in vacuo and the solid recrystd. from alc., the product (14 g. 5-chloro-2,4-bis(N-benzylsulfamoyl)aniline, m. 160°) refluxed 6 hrs. in 50 ml. 98% HCO<sub>2</sub>H and the acid evapd. in vacuo gave 7 g. 7-(N-benzylsulfamoyl)-6-chloro-1,2,4-benzothiadiazine

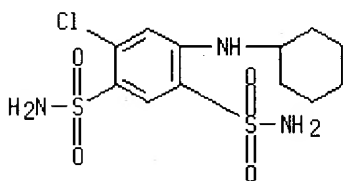


1,1-dioxide, m. 268-70°. HCO<sub>2</sub>H (5 ml., 98%) contg. 0.2 g. 2-(N-benzylsulfamoyl)-5-chloro-4-sulfamoylaniline refluxed 1 hr. and the product crystd. yielded 73% 6-chloro-7-sulfamoyl-1,2,4-benzothiadiazine 1,1-dioxide, m. 342-3°. The appropriate alkylamine in dioxane treated with 5,2,4-Cl(SO<sub>2</sub>Cl)C<sub>6</sub>H<sub>2</sub>NH<sub>2</sub> according to the Schotten-Baumann procedure gave the 5-chloro-2,4-bis(N-alkylsulfamoyl)anilines, 5,2,4-Cl(SO<sub>2</sub>NHR)2C<sub>6</sub>H<sub>2</sub>NH<sub>2</sub> (XI). XI (8 g.) refluxed 3-4 hrs. in 50 ml. 98% HCO<sub>2</sub>H, the acid soln. concd. in vacuo, and the solid recrystd. from EtOAc gave the corresponding formanilides, 5,2,4-Cl(SO<sub>2</sub>NHR)2C<sub>6</sub>H<sub>2</sub>NHCHO (XII) as tabulated (series, R, % yield, and m.p. given): XI, Et, 67, 184°; XI, H<sub>2</sub>C:CHCH<sub>2</sub>, 42, 130°; XI, Pr, 63, 120°; XII, Et, 50, 152°; XII, H<sub>2</sub>C:CHCH<sub>2</sub>, 49, 140°; XII, Pr, 49, 152°. Alkyl, aralkyl, oraryl substituents attached to the 4-position of 6-chloro-7-sulfamoyl-1,2,4-benzothiadiazine 1,1-dioxide nullified the saluretic activity in the dose range 0.5-5.0 mg./kg. An alkyl substituent in the 4-position of 6-chloro-3,4-dihydro-7-sulfamoyl-1,2,4-benzothiadiazine 1,1-dioxide also caused almost complete loss of activity. Other comparisons revealed interesting differences in the phys. properties and biol. activities of these compds.

IT **14558-87-3**, m-Benzenedisulfonamide, 4-chloro-6-(cyclohexylamino)-  
(prepn. of)

RN **14558-87-3** HCAPLUS

CN **1,3-Benzenedisulfonamide, 4-chloro-6-(cyclohexylamino)- (9CI)** (CA INDEX NAME)



L6 ANSWER 46 OF 48 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1962:403853 HCAPLUS  
DOCUMENT NUMBER: 57:3853  
ORIGINAL REFERENCE NO.: 57:735e-i,736a-c  
TITLE: Halodisulfamoylanilines  
INVENTOR(S): Novello, Frederick C.  
PATENT ASSIGNEE(S): Merck & Co., Inc.  
SOURCE: 5 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3019245		19620130	US	19591123

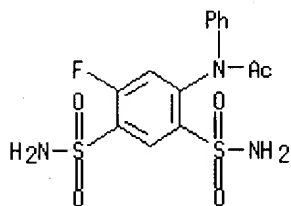
AB Continuation-in-part of U.S. 2,809,194 CA 52, 2939h. m-Chloroaniline (64 g.) added dropwise to 375 ml. chlorosulfonic acid (I), 350 g. NaCl added during 1-2 hrs., the mixt. heated to 150.degree., after 3 hrs. at 150-60.degree. treated with cold H<sub>2</sub>O, extd. with Et<sub>2</sub>O, and the product crystd. gave 5-chloroaniline-2,4-disulfonyl chloride (Ia), m. 130-2.degree.. Ia treated 1 hr. on the steam bath with 150 ml. 28% NH<sub>4</sub>OH gave 5-chloro-2,4-disulfamoylaniline, m. 251-2.degree.. Similarly, 15.2 g. o-chloroacetanilide with 120 ml. I and 100 g. NaCl gave the disulfonyl chloride and NH<sub>4</sub>OH converted the chloride to 6-chloro-2,4-□ disulfamoylaniline, m. 242-4.degree.. m-Bromoaniline (86 g.), 375 ml. I, and 350 g. NaCl followed by NH<sub>4</sub>OH gave 5-bromo-2,4-disulfamoylaniline, m.

265-7.degree.. Similarly, m-toluidine gave 2,4-disulfamoyl-5-methylaniline, m. 246-7.degree.. 5-Amino-2-chlorobenzenesulfonic acid gave 4chloro-2,5-disulfamoylaniline, m. 289-90.degree.. I (150 ml.) added dropwise in 0.5 hr. to 24.6 g. cold m-anisidine, 140 g. NaCl added in 1 hr., the mixt. heated 2 hrs. on the steam bath then 3 hrs. at 150-60.degree., the intermediate treated with NH<sub>4</sub>OH, and crystd. gave 2,4-disulfamoyl-5-methoxyaniline, m. 252-3.degree.. Similarly, m-nitroaniline (27.6 g.) gave 2,4disulfamoyl-5-nitroaniline (III), m. 260-2.degree.. II (3 g.) in 150 ml. alc. shaken with H over 250 mg. PtO<sub>2</sub> gave 5-amino-2,4-disulfamoylaniline, m. 245-6.degree.. Ia (3.8 g.) in 10 ml. Ac<sub>2</sub>O left 0.5 hr. at room temp. and the intermediate 5-chloroacetanilide-2,4-disulfonyl chloride treated with liquid NH<sub>3</sub> gave 5-chloro-2,4-disulfamoylacetanilide, m. 261-2.degree. (decompn.). Ia (6.6 g.) treated 17 hrs. at room temp. with 10 ml. BzCl and the product treated with liquid NH<sub>3</sub> gave N-benzoyl-5-chloro-2,4-disulfamoylaniline, m. 266.degree. (decompn.). Ia (5.4 g.) treated 1 hr. at room temp. with 10 ml. butyric anhydride in 10 ml. C<sub>6</sub>H<sub>6</sub> and the product treated with liquid NH<sub>3</sub> gave N-butyryl-5-chloro-2,4-disulfamoylaniline. Ia (5 g.) treated with 10 ml. caproic anhydride 2 hrs. at room temp. then with liquid NH<sub>3</sub> gave N-caproyl-5chloro-2,4-disulfamoylaniline, m. 213-15.degree.. m-Fluoroaniline similarly treated gave 5-fluoro-2,4-disulfonyl chloride, and this in PhCH<sub>2</sub>COCl left 17 hrs. at room temp. gave 5 - fluoro - N-phenylacetylaniline- 2,4- disulfonyl chloride, which with liquid ammonia afforded 2,4-disulfamoyl-5fluoro-N-phenylacetylaniline. Ia (6.6 g.) added portionwise to 50 ml. 40% MeNH<sub>2</sub>, warmed 1 hr., and collected gave 5-chloro-2,4-bis(N-methylsulfamoyl)aniline (III), m. 175.5-8.0.degree.. III (2.8 g.) and 4 ml. Et orthoformate heated 1 hr. at 110-30.degree., then 15 min. at 130-50.degree., and crystd. gave 5- chloro - 2,4 - bis(N - methylsulfamoyl) - N - formylaniline, plates, m. 192-5.degree.. 5-Chloro-2,4-disulfamoylaniline (2.9 g.) left 1 hr. with 10 ml. Ac<sub>2</sub>O and 2 drops concd. H<sub>2</sub>SO<sub>4</sub> gave 5-chloro-2,4-bis(N-acetylsulfamoyl)acetanilide, m. 222-4.degree.. Ia (9.7 g.) treated with piperidine 3 hrs. on the steam bath gave 5-chloro-2,4-bis( 1-piperidylsulfonyl)aniline, m. 162-4.degree.. Ia (9.7 g.) similarly heated 1.5 hrs. with 100 ml. 25% NHMe<sub>2</sub> gave 5-chloro-2,4-bis(N,N-dimethylsulfamoyl)aniline, m. 182-2.5.degree.. 5-Chloro-2,4-disulfamoyl-N-methylaniline was similarly obtained, m-Butyl-N-propylaniline was similarly converted to 5-butyl-2,4-bis(N-butylsulfamoyl)-N, N-lauroylpropylaniline.. 2,4-Bis( N-butyl-N-ethylsulfamoyl)-5-methylaniline, 5-propoxy-2,4-bis(morpholinosulfonyl)-N-butylaniline, and 2,4-bis(N,N-dimethylsulfamoyl)-5-propoxy-N-cinnamoylaniline were similarly prepd. 5-Chloro-2,4-disulfamoylaniline in alc. NaOH gave the Na salt. A formulation was given for 5-chloro-2,4-disulfamoylaniline in a compressed tablet. The compds. were diuretics or natriuretics.

IT 1513-12-8, Acetanilide, 5'-fluoro-N-phenyl-2',4'-disulfamoyl-  
(prepn. of)

RN 1513-12-8 HCAPLUS

CN Acetanilide, 5'-fluoro-N-phenyl-2',4'-disulfamoyl- (7CI, 8CI) (CA INDEX NAME)



Full Text	Citing References
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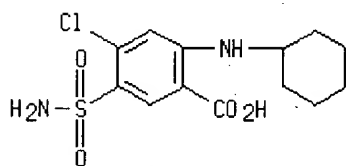
ACCESSION NUMBER: 1962:73016 HCAPLUS  
 DOCUMENT NUMBER: 56:73016  
 ORIGINAL REFERENCE NO.: 56:14032e-i,14033a,14034a  
 TITLE: Sulfamoylanthranilic acids  
 INVENTOR(S): Sturm, Karl; Siedel, Walter; Weyer, Rudi  
 PATENT ASSIGNEE(S): Farbwerke Hoechst A.-G.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1122541		19620125	DE	19591228
GB 936417			GB	
US 3058882		1962	US	

AB Title compds. were prepd. by the reaction of appropriate amines with 4,6-dichlorobenzoic acid-3-sulfonyl chloride (I). Heating 2,4-dichlorobenzoic acid (170°) with a 4-6-fold excess of ClSO<sub>3</sub>H produced I, which was isolated in 85-95% yield when the cooled reaction mixt. was poured into icewater, m. 185°. Low temp. reactions with amines resulted in dichlorosulfamoylbenzoic acids. Higher temps. caused the 6-Cl to be replaced by the amine present. The 4-Cl was not replaced at ordinary temps. even when a large excess of amine was present. To 100 ml. liquid NH<sub>3</sub> was added 29 g. I in small portions. After evapn. of the NH<sub>3</sub> the residue was treated with 300 ml. 2N HCl. The yield of 3-sulfamoyl-4,6-dichlorobenzoic acid (II) was 22.2 g. after recrystn. from MeOH-H<sub>2</sub>O (1:2), m. 233-5°. A soln. of 20 g. II in 200 ml. NH<sub>4</sub>OH under N was heated 3 hrs. at 170°/50 atm. The reaction mixt. was evapd. to 1/2 vol. and acidified (pH 2) with concd. H<sub>2</sub>SO<sub>4</sub>. The product sepd. after 2 hrs. at 0°, was washed and dried at 100°; yield, 15.4 g., m. 271.5° (decompn.) (EtOH-H<sub>2</sub>O). Other 3-sulfamoyl-4-chlorobenzoic acids prepd. were: 6-benzylamino, 26 g. from 27 g. II, 244.5° (decompn.) (EtOH), dicyclohexylamine salt, m. 209-10° (acetone-H<sub>2</sub>O, 1:2), Mg salt also prepd. (water-insol.); 6-piperidino, 10.4 g. from 10.8 g. II, m. 224° (decompn.) (50% MeOH); 6-(β-hydroxyethylamino), 7.2 g. from 10 g. II, m. 245-6° (decompn.) (aq. EtOH); 6-anilino, 47%, m. 245° (decompn.) (aq. MeOH); 6-allylamino, 15.4 g. from 20 g. II, m. 218° (decompn.) (50% EtOH); 6-cyclohexylamino, 8.9 g. from 10.8 g. II, m. 248-9° (decompn.) (EtOH); 6-(β-phenylethylamino), 12.2 g. from 10.8 g. II, m. 214° (decompn.) (EtOH); 6-diethylamino 8.8 g. from 10.8 g. II, m. 212-14° (aq. EtOH); 6-furfurylamino, 31%, m. 206° (decompn.) (aq. EtOH); 6-methylamino, m. 264°; 6-EtSC<sub>2</sub>H<sub>4</sub>NH, m. 192-3°; 6-n-octylamino, 209-11°; 6-benzylamino 221-3°; 6-benzylmethylamino, 202°; 6-(4-chlorobenzyl)amino, m. 240-2°; 6-(4-methoxybenzyl)amino, 191°. Some 4-Br analogs prepd. were: 6-benzylamino, m. 247° (decompn.) (EtOH), 8.2 g. from 10.8 g. 3-sulfamoyl-4,6-dibromobenzoic acid, m. 242-3° (aq. HCONMe<sub>2</sub>); 6-isobutylamino, 239-40°; 6-MeO(CH<sub>2</sub>)<sub>3</sub>, 198-9°. Other 4-chlorobenzoic acids prepd. were: 3-methylaminosulfonyl-6-methylamino, 7.8 g. from 10 g. I, heated with 25% aq. MeNH<sub>2</sub> 2 hrs. at 130°/50 atm. N., m. 235-7° (decompn.) (33% EtOH); 3,6-MeNHSO<sub>2</sub>(PhCH<sub>2</sub>NH), m. 248° (EtOH), 10 g. from 11.3 g. 4,6,3-Cl<sub>2</sub>MeNHSO<sub>2</sub>C<sub>6</sub>H<sub>2</sub>CO<sub>2</sub>H, m. 198-200°, prepd. from 14.5 g. I. Some of these compds. have therapeutic value as diuretic and saluretic agents; as the latter, Na was removed to a much greater extent than K.

IT 4793-39-9, Anthranilic acid, 4-chloro-N-cyclohexyl-5-sulfamoyl- (prepn. of)

RN 4793-39-9 HCAPLUS  
 CN Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-(cyclohexylamino)- (9CI) (CA  
 INDEX NAME)



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Full Text Citing  
 References

ACCESSION NUMBER: 1962:66743 HCAPLUS  
 DOCUMENT NUMBER: 56:66743  
 ORIGINAL REFERENCE NO.: 56:12805b-f  
 TITLE: Benzene disulfonamides  
 INVENTOR(S): Siedel, Walter; Sturm, Karl; Weyer, Rudi  
 PATENT ASSIGNEE(S): Farbwerke Hoechst A.-G.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable

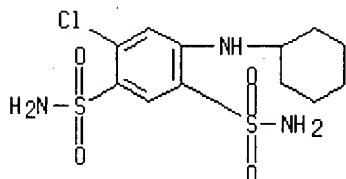
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1119290		19611214	DE	19591107
GB 965089			GB	

AB 5-Chloro-N-alkylaniline-2,4-disulfonamides were prepd. 4,6-Cl<sub>2</sub>C<sub>6</sub>H<sub>2</sub>(SO<sub>2</sub>Cl)<sub>2</sub>-1,3 (I), m. 122-3°, (35 g.) was added in portions to 150 ml. liquid NH<sub>3</sub>. After evapn. the residue was treated with 300 ml. N HCl to give 26.5 g. 4,6-dichlorobenzene-1,3-disulfonamide (II), m. 276-8° (H<sub>2</sub>O-EtOH). A soln. of 9.15 g. II in 100 ml. 25% NH<sub>4</sub>OH was heated in an autoclave 3 hrs. at 120° under 50 atm. N. The mixt. was concd. to 70 ml. and treated with concd. HCl. After 1 hr. at 0° 6.9 g. 5-chloroaniline-2,4-disulfonamide (III), m. 252-3° (H<sub>2</sub>O-EtOH), was obtained. When the reaction was run without isolation of II, 10.3 g. I gave 5.8 g. III. Similarly prepd. from the corresponding amines were the following N-alkylated derivs.: Et, m. 187-9°; allyl, m. 192-3°; (CH<sub>2</sub>)<sub>2</sub>OH, m. 1968°; iso-Bu, m. 183-5°; cyclopentyl, m. 184-5°; cyclohexyl, m. 218-29°; (CH<sub>2</sub>)<sub>2</sub>SMe, m. 200-2°; (CH<sub>2</sub>)<sub>3</sub>OMe, m. 134-6°, 151°; CH<sub>2</sub>Ph, m. 213-14°; Ph, m. 244-6°; (CH<sub>2</sub>)<sub>2</sub>Ph, m. 215-17°; CH<sub>2</sub>CH(OEt)<sub>2</sub>, m. 172°; 4-ClC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>, m. 243°; (CH<sub>2</sub>)<sub>3</sub>OEt, m. 157-9°; n-C<sub>8</sub>H<sub>17</sub>, m. 175-7°; m-ClC<sub>6</sub>H<sub>4</sub>, m. 244-6°; m-BrC<sub>6</sub>H<sub>4</sub>, m. 235-6°; p-MeOC<sub>6</sub>H<sub>4</sub>, m. 235-7°. I with pyrrolidine (IV) in tetrahydrofuran yielded 5-chloro-1-pyrrolidinobenzene-2,4-disulfopyrrolidide, m. 138°. II with IV in EtOH gave 1-pyrrolidino, m. 164-6°, with morpholine 1-morpholino analogs, m. 260-1°. I with MeNH<sub>2</sub> in EtOH gave 5-chloro-N-methylaniline-2,4-disulfonmethanamide, m. 204-6°. I with MeNH<sub>2</sub> in tetrahydrofuran gave the 2,4N,N'-dimethyldisulfonamide, m. 187-9°, which with PhCH<sub>2</sub>NH<sub>2</sub> (V) gave the corresponding N-benzylaniline, m. 186-7°. 4,6-Br<sub>2</sub>C<sub>6</sub>H<sub>2</sub>(SO<sub>2</sub>Cl)<sub>2</sub>-1,3, m. 153°, was treated in liquid NH<sub>3</sub> to give 4,6-dibromobenzene-1,3-disulfonamide, m. 280-2°, which with V gave 5-bromo-N-benzylaniline-2,4-disulfonamide, m. 220-2°.

IT 14558-87-3, m-Benzenedisulfonamide, 4-chloro-6-(cyclohexylamino)- (prepn. of)

RN 14558-87-3 HCAPLUS  
 CN 1,3-Benzenedisulfonamide, 4-chloro-6-(cyclohexylamino) - (9CI) (CA INDEX NAME)



=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	257.23	414.96
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-35.28	-35.28

FILE 'REGISTRY' ENTERED AT 14:49:31 ON 04 JUL 2004  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 JUL 2004 HIGHEST RN 703404-07-3  
 DICTIONARY FILE UPDATES: 2 JUL 2004 HIGHEST RN 703404-07-3

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.84	415.80
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-35.28

FILE 'REGISTRY' ENTERED AT 14:50:53 ON 04 JUL 2004  
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 JUL 2004 HIGHEST RN 703404-07-3  
 DICTIONARY FILE UPDATES: 2 JUL 2004 HIGHEST RN 703404-07-3

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=>
L11      STRUCTURE UPLOADED

=> d l11
L11 HAS NO ANSWERS
L11          STR

=> s l11
SAMPLE SEARCH INITIATED 15:05:49 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      15 TO ITERATE

100.0% PROCESSED      15 ITERATIONS      0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:   68 TO      532
PROJECTED ANSWERS:      0 TO      0

L12          0 SEA SSS SAM L11

=> s l11 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 15:05:55 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      247 TO ITERATE

100.0% PROCESSED      247 ITERATIONS      0 ANSWERS
SEARCH TIME: 00.00.01

L13          0 SEA SSS FUL L11

=>
L14      STRUCTURE UPLOADED

=> d l14
L14 HAS NO ANSWERS
L14          STR

=> s l14
SAMPLE SEARCH INITIATED 15:06:51 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      15 TO ITERATE
```

100.0% PROCESSED      15 ITERATIONS      0 ANSWERS  
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:   ONLINE   \*\*COMPLETE\*\*  
                              BATCH   \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS:      68 TO      532  
 PROJECTED ANSWERS:         0 TO      0

L15                   0 SEA SSS SAM L14

=> s 114 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS  
 DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y  
 FULL SEARCH INITIATED 15:06:59 FILE 'REGISTRY'  
 FULL SCREEN SEARCH COMPLETED -      247 TO ITERATE

100.0% PROCESSED      247 ITERATIONS      0 ANSWERS  
 SEARCH TIME: 00.00.01

L16                   0 SEA SSS FUL L14

=>

L17            STRUCTURE UPLOADED

=> d 117

L17 HAS NO ANSWERS

L17                   STR

=> s 117

SAMPLE SEARCH INITIATED 15:08:08 FILE 'REGISTRY'  
 SAMPLE SCREEN SEARCH COMPLETED -      15 TO ITERATE

100.0% PROCESSED      15 ITERATIONS      0 ANSWERS  
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:   ONLINE   \*\*COMPLETE\*\*  
                              BATCH   \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS:      68 TO      532  
 PROJECTED ANSWERS:         0 TO      0

L18                   0 SEA SSS SAM L17

=> s 117 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS  
 DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y  
 FULL SEARCH INITIATED 15:08:15 FILE 'REGISTRY'  
 FULL SCREEN SEARCH COMPLETED -      247 TO ITERATE

100.0% PROCESSED      247 ITERATIONS      0 ANSWERS  
 SEARCH TIME: 00.00.01

L19                   0 SEA SSS FUL L17

=>

L20            STRUCTURE UPLOADED

=> d 120

L20 HAS NO ANSWERS

L20                   STR

=> s 120

SAMPLE SEARCH INITIATED 15:09:21 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 15 TO ITERATE

100.0% PROCESSED 15 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 68 TO 532  
PROJECTED ANSWERS: 0 TO 0

L21 0 SEA SSS SAM L20

=> s 120 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS  
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y  
FULL SEARCH INITIATED 15:09:29 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 247 TO ITERATE

100.0% PROCESSED 247 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

L22 0 SEA SSS FUL L20

=>

L23 STRUCTURE UPLOADED

=> d 123

L23 HAS NO ANSWERS

L23 STR

=> s 123

SAMPLE SEARCH INITIATED 15:10:48 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 15 TO ITERATE

100.0% PROCESSED 15 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 68 TO 532  
PROJECTED ANSWERS: 0 TO 0

L24 0 SEA SSS SAM L23

=> s 123 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS  
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y  
FULL SEARCH INITIATED 15:10:57 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 247 TO ITERATE

100.0% PROCESSED 247 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

L25 0 SEA SSS FUL L23

=>